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DESCRIPTIVE CATALOGUE

OF THE

FOSSIL REMAINS

OF

VERTEBRATA

FROM

THE SEWALIK HILLS, THE NERBUDDA, PERIM ISLAND, &c.

IN THE

MUSEUM

OF THE

Asiatic Society of Bengal.

MUSEUM OF COMPARATIVE ZOOLOGY CAMBRIDGE, MASS.

BY

HUGH FALCONER, M.D. F.R.S. G.S. & L.S.

ASSISTED BY

H. WALKER, ESQ.,

LATE PROFESSOR OF ANATOMY AND PHYSIOLOGY, CALCUTTA.

CALCUTTA:

PRINTED BY C. B. LEWIS, BAPTIST MISSION PRESS.

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PREFATORY REMARKS.

This Catalogue has been undertaken with a view to endeavour to ascertain the extent of the various collections of vertebrate Fossil remains which have, at different times, been presented to the Asiatic Society of Bengal.

No separate record of these presentations appears to have been ever kept by the Society; nor, strange to say, has the correspondence of the Donors been preserved; so that nothing, in the shape of information regarding them is now accessible, besides the notices often brief and scanty in details contained in the Proceedings as printed in the Journal.

The collections may be classified under two heads, viz. Indian and Foreign.

The most important of the Indian, may be arranged conveniently in a Geographical order thus, the collections, from 1st, Ava; 2nd, The Sewalik Hills; 3rd, The Valley of the Nerbudda; 4th, Perim Island and the Gulf of Cambay; 5th, Scinde; 6th, The Alluvium of the Jumna River; 7th, A few specimens from the Delta of the Ganges, and from the Banks of the Betwa River.

The foreign collections are of less importance. They consist: 1st, of a few *Enaliosaurian* remains probably from the English Lias, but they bear no marks, nor has any information been found out regarding them; 2nd, some *Chelonian* remains of very modern aspect from the Mauritius; 3rd, a very interesting series of Reptilian remains from the older secondary strata of the Cape of Good Hope, consisting chiefly of bones of

Dicynodon. It is worthy of remark that these remains were presented to the Asiatic Society in 1836 by Mr. Pope, of the Cape of Good Hope, through Mr. J. Trotter, nine years before Mr. Bain was rewarded in 1845, for their supposed first discovery by the award of the proceeds of the Wollaston Fund, by the Geological Society of London. It is stated in the proceedings of the Society that Mr. Pope "the modest discoverer of this new fossil deposit" found them in the bed of the *Ganka* River in the district between the *Zwarteberg* and the *Nienwbergen* the Central part of the Cape Colony Lat. 33° S. and 22°—23° W. Long. being the district where Mr. Bain, several years afterwards, met with his specimens (Jour. A. S. Vol. V. p. 518.)

Besides those above enumerated, the Society's Museum possesses, of foreign specimens, some cave bones of the *Ursus spelæus* from Germany; also casts of English Coprolites, &c. presented by Dr. Buckland, and of *Basilosaurus* remains (*Zeuglodon* of Owen) presented by Dr. Harlan from America.

The main object of the present Catalogue was to identify, and determine the extent of the Indian Collections; and no language can exceed the appalling confusion, disorder and dilapidation in which they were found. Fossil bones from the Lias of England, from the Cape of Good Hope, Ava, Perim Island, the valley of the Nerbudda and the Sewalik Hills, huddled together in heaps, distributed over various rooms on the ground floor, and in ninety-nine cases out of the hundred, without a label or mark of any kind whatsoever to indicate whence they came! Many valuable specimens that had been presented to the Society were lost; others were found broken and the missing pieces either never recovered, or only after a search that extended over weeks. The only exception was in the case of Col. Colvin's second presentation, the specimens belonging to which were in glazed cases, in fair preservation and marked with distinctive numbers.

The following remarks occur in a paper on Col. Colvin's fossils by James Prinsep, dated the 6th April, 1836.

"The Society will doubtless be eager to do every honour to the munificent donor of these splendid Fossils, if it has any real wish to acquire the reputation of possessing a valuable museum. The foundation of our fossil collection was but laid four years ago, and already through the contributions of Col. Burney, Dr. Spilsbury, Capt. Smith, Mr. Dean, &c. now enriched by Col. Colvin's vast store of specimens, it has become necessary to devote an entire apartment to this instructive department of Natural History. Our smallest return of gratitude to those who have been at such considerable expense in promoting the Society's interests will be to do honor to what has been so generously bestowed, by making up fit cabinets to exhibit them to the best advantage "and by spreading the knowledge of them as expeditiously and widely as possible." (Journal A. S. Vol. V. p. 181.) The commentary upon this passage, is to be found four years after in Mr. Piddington's reports, when he officiated as Curator. In his first monthly report dated the 30th November, 1840, he refers to the sad dilapidation going on among the Geological and Palæontological Collections, partly from trusting to very perishable recording by ink and paper labels in a climate like this; partly from the almost entire absence of any general or serial Catalogues to the various collections; and partly from breaking into the Collections for completing arrangements, that were left incomplete, or never carried out. In the Palæontological collection, there were no registers or Catalogues beyond the few lists printed in the Journal, and the specimens were then "fast loosing their labels of names, and above all, of localities." In his subsequent reports (Vol. IX. pp. 863, 943, 1056, and Vol. X. pp. 166, 415, 675,) he mentions the steps he was then taking to remedy these evils, and it is only an act of bare justice in me now to state that I have seen abundant evidence in the methodical labels of the cases and drafts of commenced Catalogues which are still in existence, that Mr. Piddington was doing his best and with considerable success, during the eleven months when he officiated as Curator, to place the Palæontological collections in

an orderly and accessible condition. What was incumbent on the Society, was simply to act up to James Prinsep's recommendations in providing suitable cases for the preservation of the fossils and keeping them separate. That it was under both an implied contract and an obligation to do so when it accepted the collections and acknowledged their receipt in its printed proceedings, no one can deny; yet it is quite within the truth of the facts to state, that the Asiatic Society has broken faith with every donor from whom it ever received Indian Fossil collections, by the signal neglect with which it treated the specimens after they were once housed within its walls. But this was not all. There is a pile of rubbish in the yard, known by a whimsical name, consisting of ejected materials, such as discarded rock specimens, broken corals, &c. It was the practice apparently, to pitch or sweep out fossil bones upon this heap. Colonel Baker one day disentombed from it, an important portion of a valuable and cherished Dadoopoor specimen and fitted it to the original mass. The valuable and rare specimen of the lower jaw of *Merycopotamus dissimilis* (No. S. 246 of this Cat.) together with fragments of the Gigantic Tortoise and numerous other fossil bones were found by myself in the same heap of rubbish outside!

Amidst such alleged disorder and huddling together of specimens from different strata of different geographical origin, it may be asked how was it possible to make any thing approaching a satisfactory or reliable Catalogue so far as localities are concerned? The reply is that on this head the Catalogue does not profess to be more than approximative; a great number of the assigned localities are simply conjectural. But the following circumstances furnished material aid. Besides being well acquainted with the ordinary characters and appearance of the Sewalik fossils, I was familiar with those of the Perim Island specimens, having examined and in part described a large collection presented by Capt. Fulljames to the Geological Society of London. I was familiar also with the first Ava Collection,

made by Mr. Crawfurd in 1826, having carefully gone over the whole series in the same museum. The characters of the Nerbudda specimens were familiar to me through the collections taken to England by Mr. Charles Fraser; and Dr. Spilsbury was at hand to point out all which he had presented to the Asiatic Society, that were still in existence.

The Perim Island fossils, are usually imbedded in a yellow marly conglomerate, very different from any thing met with among the Sewalik or Ava Fossils. Where the matrix has been washed off, the specimens have usually more or less of marine encrustation upon them. These characters, readily distinguish them from the Ava, Sewalik Hills, or Nerbudda, fossils: and no specimen probably has been introduced into the Perim portion of the Catalogue, that did not come from the Island or adjoining parts of the Gulf of Cambay. No elephants' molars were found among them although Capt. Fulljames mentions "the teeth of Mammoth" as having been transmitted by him to the Asiatic Society. (Journ. A. S. Vol. V. p. 200.)

The Nerbudda fossils are readily distinguished from those of Ava and the Sewalik Hills by their mineral characters; but this help fails in discriminating them from the fossils of the Jumna Alluvium. Some specimens have been conjecturally introduced into the Nerbudda Catalogue although not recognized by Dr. Spilsbury, the only Nerbudda Donor. This circumstance throws great doubt on the place assigned to them. Are they from the Jumna, or of the Culpee specimens presented by Dr. Leslie?*

The great mass of the Sewalik Hill collections were separated without much hesitation.

The most unsatisfactory part of the Catalogue is what regards the Ava collection. The greater portion of it was presented by Col. Burney, and the rough list by James Prinsep, printed in the proceedings (Vol. III. p. 365 J. A. S.) enumerates the following:

* Vide Gleanings, Vol. I. p. 23, and J. A. S. Vol. II. p. 623.

2 Jaws and several teeth of fossil elephant.
7 jaws and teeth of Mastodon, Hippopotamus, &c.
8 fragments of Alligators' Jaws.
47 saurian (Crocodile) vertebræ.
170 fragments of Emys and Trionyx shell.
1 humerus of Rhinoceros.
200 unclassified fragments of Bone.

435.

The Ava specimens are very often strongly impregnated with hydrate of iron, black and heavy with a gritty or gravelly matrix. But some of the Sewalik localities yield specimens having the same characters, so that when placed together they can hardly be distinguished. In searching for Col. Burney's 435 specimens, only one was found namely a Crocodile's vertebra (No. A. 255) bearing an Ava label. Of the two jaws and several teeth of fossil Elephant, not one was met with, which could confidently be assigned to Ava. The same was the case with *Hippopotamus*, although a lower jaw from Col. Burney containing all the incisors is specially described (J. A. S. Vol. VI. p. 1099.) All the black, iron infiltrated fragments of *Emys* and *Trionyx* bones scattered about the different rooms, were brought together to try and make up 170 pieces mentioned in the list. I have misgivings now that several of the *Stegodon* group of elephant molars assigned to the Ava catalogue were in reality yielded by the Sewalik Hills: and that the episternal portions of the Gigantic Tortoise attributed in the catalogue to the latter may have been derived from Ava. In short the Ava portion of the Catalogue is wholly conjectural and therefore untrustworthy. But what help was there for it, where only one specimen out of 435, bore a label to distinguish them from hundreds of others? The small collection of Fossil bones from Ava presented by Mr. J. Calder in 1831, and partly described in the Gleanings Vol. III. p. 161 was deferred to the last, and then from want of time left uncatalogued. Fortunately the specimens have been kept

together, and are in the same state now as when originally presented.

The Scinde collection although of much interest is comparatively limited.

The Jumna alluvium collection consists of specimens in part presented by Capt. E. Smith and Lieut. Burt of the Engineers, but the greater number, by Serjt. E. Dean.

Capt. Smith's specimens were readily discovered, and among them, besides those enumerated and figured in the journal, I found the perfect Astragalus of a *Hippopotamus* distinct from the Sewalik Hill species, and apparently identical with the Nerbudda *Tetraprotodon*. But Serjeant Deans' series proved to be in such confusion, that under the pressure of an approaching departure for Europe, I felt that I could not afford them the time they required and left them unarranged. They appear to have been mixed with many Ava or other specimens which bear no mark or number to indicate which is which. I regret this the more, as I consider the Jumna Fossils to be the most promising of results bearing upon the human period, and I strongly recommend them to any one who is able and willing to undertake the task of investigating them.

Mr. James Prinsep, in his notes* upon Col. Colvin's 2nd presentation states, that in order to bring like to like, he had altered the numbering of the Catalogue of them furnished by Lieutenants Baker and Durand. But on going into the details of Mr. Prinsep's numbers, it was found that they did not, in a great many instances, agree with the specification in the Catalogue; what was entered as a vertebra proving to be the end of a tibia and vice versâ, so that the numbers were of no assistance in making out the specimens for this Catalogue. The greater part of Mr. Dawes' specimens were made out by the numbers, which were in this case fortunately left undisturbed. They have not been kept separate; but interculated with the great mass of the Sewalik specimens in that part of the Catalogue.

* J. A. S. Vol. V. p. 182.

It was intended to have serially arranged the specimens in the order of their affinities: but this was found to be impracticable as there was no space available to distribute them in a rough preliminary arrangement. In consequence, bones belonging to one species, instead of following in consecutive numbers are distributed irregularly throughout. In this view, the Catalogue can only be regarded as a first effort to serve the preparation of a more perfect Catalogue hereafter. It has assumed the character of a descriptive Catalogue instead of being merely a numerical and nominal one in consequence of the great number of new or important specimens that required description.

Each geographical series has its own numbers, thus the

Ava specimens are marked	A. 1 A. 2 &c.
Sewalik Hills, ditto.....	S. 1 S. 2 S. 3 &c.
Perim Island	P. I. 1 P. I. 2 P. I. 3
Nerbudda.....	N. 1 N. 2 N. 3 &c.
Scinde, ditto	Sc. 1 Sc. 2 Sc. 3 &c.
Cape of Good Hope, ditto	C. G. H. 1 C. G. H. 2 C. G. H. 3 &c.

The discriminating numbers have been attached both by paper labels covered over with mastic varnish, and with white paint on a black ground, so as to secure every chance of durability.

During the progress of the Catalogue a party of stone-cutters were employed in chiselling the specimens, and clearing them of matrix, most of the specimens in the collection have in this manner been brought fully out; where they required it.

The greater part of the Catalogue is in the hand-writing of my friend Dr. Henry Walker: and I will say no more of his services, than that without his most efficient aid, this Catalogue

could not have been accomplished. The aid applied to every thing connected with it.

I would desire to express a wish that the Catalogue such as it is, be preserved as now written, for satisfactory reference by those who may have occasion to examine the fossils hereafter.

28*th October*, 1855. H. F.

P. S.—The specimens from the Delta of the Ganges and the Banks of the Betwa River, like those from the Jumna, have been left uncatalogued. Broken specimens were united by a native cement of gluten and quick lime.

H. F.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/1	Mastodon latidens.	Fine specimen of the upper jaw, both sides containing 1 entire molar in each and the anterior ridge behind of another molar germ. The specimen is broken off horizontally about 4 inches above the base of the crown of the molars shewing the floor of the nasal fossa. The palate is perfect from the posterior border to the commencement of the diasteme where it is abruptly broken off. The teeth are in the most perfect state of preservation, the enamel is thick, rugose at the sides and presenting on the crown a clouded pearly appearence; the anterior of the molars consists of 4 ridges and a "talon" or heel ridge; the 3 anterior ridges are more or less worn, the 4th ridge only slightly touched in the middle: each tooth exhibits longitudinally a line bisecting it into an outer and an inner half: the ridges are transverse the furrow intervening being unbroken, with a small mammillary process				Purchased from the Government Tosha khannah. A portion of the enamel border of the anterior ridge left molar is broken off on the outside. The enamel very thick, there is no appearance of 'crusta petrosa' on the furrows. The rugosity of the surface runs in transverse wavy grooves or meshes somewhat as in the enamel surface of Rhinoceros, but more marked.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/1		bounding the interior termination of the furrow and interposed between the ridges. These mammillary processes are chiefly seen in the 1st and 3rd furrows—absent from the second. Each ridge near the middle throws out one or two accessary adpressed mammillæ behind, which encroach on the furrows without disturbing their continuity, causing loops of wear when the ridges are ground down; there are about six mammillæ to each ridge, the innermost of which is the largest. The talon on both sides forms a rather complicated ridge, more largely developed than in most other species of mastodon. The first and second ridge of the left molar are worn down, so as to shew continuous depressed discs of ivory surrounded with a border of enamel. The third ridge shews three small discs, the outermost mammilla being hardly touched; the fourth ridge and the talon are hardly touched; on the right side, the anterior ridge forms also a continuous depressed disc, the second ridge is dis-				

tinctly bipartate into discs of an irregular pattern with a loop in each behind caused by the accessary mammillæ. The third ridge shews three discs, the outer mammilla being nearly intact, the fourth ridge is barely touched in the middle and the talon is entire. The talon on the right side shews seven mammillæ, large and small, that on the left only four. The posterior molars are in a state of germ and the first ridge only is preserved on the left side, on the right side it is broken in the middle. The posterior tooth is seen to be of much larger size than the anterior one; the first ridge consists of about five mammillæ with an accessary mammilla behind the first and second.

This specimen is singularly free from matrix of which not even the smallest portion is visible upon the discs of wear or in the crevices between the teeth. In this respect it resembles a fresh macerated bone. A black shining surface covers the upper side irregularly, upon which thin gold leaf has been freely dispersed. This tested by a hot iron proved to be caused by a coat of Thee-tsee varnish so commonly used by the Burmese for lack-

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/1		ering. This was evidently an artifice to enhance the supposed value of the specimen, which appeared to the Burmese King worthy of being made a royal present and was so offered to the Governor-General of India by the Burmese Embassy at Calcutta, on December, 1854.				

Dimensions.

Molars.	*Right.*	*Left.*
Length, ...	6,35	5,95
Width of crown in front, ...	3,5	3,45
Ditto ditto behind, ...	3,65	3,6
Height of crown in front exteriorly, ...	1,25	1,15
Ditto ditto interiorly, ...	1,	0,85
Ditto ditto behind exteriorly,	2,05	2,1
Ditto ditto ditto interiorly, .	1,8	1,75
Width of first ridge posterior molar, ...		4,15
Exterior height of ditto ditto.		2,3

Other dimensions.

Breadth across the two molars anteriorly, ...	8,3
Ditto ditto posteriorly.	10,3

		Width of palate between molars anteriorly, ... 1,5 Ditto ditto posteriorly, ... 3,15 Length of palate,..... 8,1 Extreme width of jaw behind, ... 10,7 Greatest height from crown of molar behind to upper surface of fragment, ... 6,5 Thickness about middle between surface of palate and floor of nares,.. 2,35 The bony surface of the specimen when unbroken is generally tinged of a brownish red colour. In front of the right molar, inner side, there is a nearly obliterated pit of one of the fangs of the molar preceding it which had been shed. There is no trace of this on the left side where the molar is more advanced in wear, having been protruded earlier.				
A/2	Elephas (Stegodon) Cliftii.	Fine specimen consisting of the superior maxilla, right side detached, with the last true molar in situ, the whole length of the alveolus shewn with a small part of the diasteme in front, and a portion of the remains of the penultimate true molar which had been worn out. The specimen is impregnated with black ferrugi-	Unknown but inferred from Matrix to be from Ava.	J. A. S. Vol. 3, p. 365 ? supposedto be one of the seven jaws mentioned in the J. A. S.	Unknown *An* Col. Burney ?	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/2		nous infiltration, and is sparingly covered with a gritty sandstone matrix: the last molar is nearly entire and in fine preservation shewing seven ridges and a heel: the first three ridges are well worn, the most anterior being nearly ground out, and they show a continuous transverse excavated fossa, surrounded by a continuous more or less waved belt of enamel. The fourth ridge is only slightly abraded at the apices of the mammillæ, and the 5th ridge is barely touched. The 6th and 7th with the heel are quite intact. The plane of wearing slopes obliquely from the outside inwards, so that the interior side of the first three ridges is ground down much lower than the outer side. There is no mark of a longitudinal line bisecting the tooth as on the true mastodons into an outer and inner division. The ridges are a little convex in front and concave behind, determining a similar form to the vallies between them, which run across without interruption, there being no accessary mammillæ deve-		as above quoted.		

loped so as to encroach upon the valleys. The mammillæ are obtuse and close packed, they are obscurely separated from each other by shallow grooves or fissures and nine or ten of them may be counted on the intact ridges. Hardly any crusta petrosa is visible except between the 5th, 6th and 7th ridges. The ivory is very thick with a rugose surface very much like that of Mastodon latidens. Overlapping the front ridge, there is a small portion of the ivory of the penultimate molar, the remains of which had not yet dropped out.

Dimensions.

Extreme length of crown of molar,..	9,35
Breadth of ditto at 2nd ridge, ...	4,3
Ditto at 5th ridge, ...	4,05
Ditto at 7th ridge, ...	3,6
Ditto of heel, ...	2,8
Height of crown of 3rd ridge, taken at outside,.....	1,3
Ditto inner, ...	1,

Two large fangs are visible on either side in front, and another outside below the 3rd ridge.

The crown of the tooth tapers gradually and slightly from in front backwards.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/2		The ridges of enamel even where intact are very low for the size of the tooth. Extreme length of specimen is, ... 13 Height of ditto from surface of 5th ridge to fracture, ... 8 The characters of the crown of the tooth agree very closely in every respect with the tooth of the lower jaw figured Faun. Antiq. Siv. pl. 30, fig. 5, and it is inferred to be the last true molar of the upper jaw represented in fig. 3, of that plate. It is possible that the fragment in front which is attributed above to the penultimate molar may be an anterior ridge of the last true molar which had got detached from wearing out, in which the normal character of the tooth would be to have eight ridges and a talon instead of seven as described above.				
A/3	Mastodon latidens?	Specimen consisting of the horizontal ramus of lower jaw left side, truncated obliquely downwards and backwards in front of the molar and behind about the middle of the ascending ramus, of which	Doubtful, supposed to be Ava.	...	Unknown *An.* Col. Burney.	This is a valuable and characteristic specimen and it is much to be regretted, that there is no trace of its origin

	it shews a part. The specimen is dark-coloured from ferruginous infiltration and is sparingly covered with a thin crust of gritty calcareo-arenaceous matrix, resembling that found on the surface of many of the Ava fossils. The whole length of the molar tooth is visible in situ, but unfortunately all the enamel surface of the crown is broken off, so as to deprive us of any direct and conclusive evidence as to the species, but it is evident that the tooth is the third or last true molar, as the section behind shews no marks of the nucleus of another successional tooth to come after it, but from the narrowness of the crown it is confidently inferred that the specimen belonged to a true tetralophodon mastodon (either M. latidens or M. Perimensis) and not to E. (Stegodon) Cliftii. The jaw is characterised by its great transverse diameter behind and height in front. The removal of the Symphysis has carried away the outer orifices of the mentory foramina but two canals are seen in the section which also exhibits a nearly cylindrical core, which is probably the residuum of the fang of a shed molar or a tusk of the lower jaw ?				in records of As. Soc.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/3		*Dimensions.* Extreme length of fragment from broken edge via Symphysis to broken edge behind, ... *ft. in.* 1 4,7 Height of jaw measured outside immediately in front of molar,..... 8,5 Ditto ditto behind, ... 6,7 Greatest diameter behind, taken at bulge of ascending ramus, ... 8, Diameter in front in a vertical line with the anterior edge of the molar, ... 5,4 Extreme length of alveolus and crown of molar,..... 10, Diameter of crown of molar in front, 2,4 Ditto where widest behind, ... 2,8 The tooth narrows very much from behind backwards as seen in the section, the residuary portion of the crown of the molar viewed from the inside in front is elevated 1-6 inches above the alveolar border. There is no portion of the enamel visible except an edging on the outer side.				

		The form of the lower jaw is much thicker and shorter in proportion than in the existing Indian Elephant; further, supporting the conclusion that it belongs to a true mastodon.				
A/4	Mastodon latidens.	Fragment of lower jaw left side, comprising part of horizontal ramus from base of coronoid apophysis to about 6½ inches forward, containing the posterior half of a well-preserved molar, which is inferred to be the last or third true molar from the absence of the indication of any other forming behind. It shews four ridges with a talon, the 3 anterior of which are well worn shewing that the animal was fully adult. The tooth agrees in the closest manner in size, form, amount of wear and every other respect with the corresponding specimen figured in Faun: Ant. Siv. Pl. 30, fig. 6, which however has a ridge more in front preserved. The anterior ridge of the specimen is worn into a deep transverse disk of which the anterior boundary edge of enamel is wanting. The second and third are also worn into continuous excavated disks; the fourth shews the caps of three large mammillæ slightly touched and the talon	Doubtful, inferred to be Ava.	...	Unknown *An.* Col. Burney.	No label or information as to its origin. NOTE.—The Engine turned-like marking, resembling that of a watch case which Owen states to be "peculiar to the tusks of proboscidian Pachyderms" is distinctly visible at the posterior *end of the ivory* in this molar, shewing that the ivory of the tusk does not differ in structure from that of the molar. The term "*dentine*" is therefore untenable: vide Owen "Odontography" p. ii. Introduct. and p. 627.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/4		consisting of three mammillæ in a transverse row is intact. The accessary mammillæ described as bounding the valleys on the inside of the Burma Embassy specimen (No. 1,) are shewn of very large size in the specimen. *Dimensions.* Extreme length of fragment,..... 8 Height of section in front, ... 7,8 Ditto ditto behind,..... 6,2 Diameter behind, ... 6,55 Length of fragment of molar, ... 6,1 Greatest width in front,..... 4,1 Height of enamel crown in front,.... 1,4 The colour of the specimen differs from most of the Ava fossils in absence of a ferruginous tint and the enamel is greyish and pearly looking as in No. 1: very little matrix upon it.				
A/5	Mastodon ?	Fragment of lower jaw, left side, divided longitudinally nearly in the middle, jet black in colour with a small quantity of sandy matrix, no indication of a tooth or	Ava ?	...	Unknown.	Tied up with split ratan and therefore inferred to be from Ava.

		alveolus but segment of a canal (Dentary?) running longitudinally near the inferior border. The fragment is in two joined pieces. Extreme length $11\frac{1}{2}$ inches. Identification very obscure.				
A/6	Mastodon latidens.	Fragment of molar divided vertically and lengthways consisting of the back part with three well worn ridges and a talon and one great posterior fang. The end of the talon bears upon its ivory surface the disk of pressure of a molar behind. The enamel is very thick and in every respect as in specimen No. 4. The worn surface of the disks agrees exactly with those of the Ava specimens figured in the Fauna Antiq. Siv. pl. 31, fig. 7, 8. Extreme length of specimen,..... 3,5 Height from fang to surface of crown, 3,5	Ava ?	...	...	No mark or information.
A/7	Mastodon ——— ?	Fragment consisting of the last ridge and talon of a molar tooth with the mammillæ in germ and entire. The mammillæ numerous and closely aggregated together. Species indeterminable.				
A/8	Mastodon ——— ?	Another specimen closely resembling No. 7, in size, colour, form and matrix.				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A 9, 10, 11	Elephas (Stegodon) Cliftii.	Three large fragments of molars, posterior portion of the upper jaw; No. 9 consisting of three ridges worn; No. 10, shewing three ridges unworn with abundance of crusta petrosa; and No. 11, which is of a very large tooth, one and a half ridges and a talon. These specimens agree closely with the characters of specimen No. 2.	Ava, doubtful.			
A 12	Elephas (Stegodon) Cliftii.	Portion of posterior end of superior maxillary left side with the alveolus and pterygoid process behind, containing the posterior half of a very large molar of which five ridges are exposed, the talon being covered over with crusta petrosa; the first three ridges are well worn, the fourth nearly intact. The fragment is broken obliquely backwards and upwards from the surface of the crown of the molar. The jaw had been imbedded in a hard sandstone matrix which is not ferruginised and the ivory section is white. Extreme length of fragment,..... $11\frac{1}{2}$ Length of molar, ... 7,6 Greatest width of ditto at 2nd ridge, 4,6	Ava or Sevalik Hills?	...	Unknown.	No marks or information. Locality very doubtful.

		This must have belonged to a very large animal.				
A/13	Mastodon Sivalense? very doubtful.	Thin vertical section of molar tooth shewing enamel and ivory.	——— ?	...	——— ?	No mark.
A/14	Elephas Cliftii.	Fragment of a finely preserved molar of the upper jaw, consisting of five ridges nearly entire, the front ridges broken off together with a part of the first ridge in specimen; the first ridge only of the specimen is touched with wear. A large quantity of cement, fills the valleys and nearly covers over the back ridges. The mammillary processes are beautifully shewn; they are nearly equal and are seven to eight in each ridge disposed in a convex arc. The specimen is smoke-coloured like many of the Ava specimens in Mr. Crawford's original collection, Geological Society. Considered to be the first true molar of the upper jaw. Length of specimen, ... 4,5 Width of ditto at second ridge,..... 2,8 Greatest width behind, ... 2,9				
A/15	Ditto.	Fragment of molar, shewing three ridges.	Ava ?	...	...	No mark or information.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A 16	Elephas Cliftii.	Fine fragment comprising the horizontal ramus lower jaw left side; with nearly the whole length of the last molar imbedded in it, and broken off in front at the symphisis shewing a part of the diastemal ridge and behind a little in front of the offset of the coronoid, the fracture vertically including a portion of the fang; a single mentory foramen is shewn in front of considerable size. The whole of the anterior two-thirds of the crown of the molar is entirely worn out into a hollow surface of ivory without any enamel. The ivory is seen to be of great thickness. Two ridges and a part of a third are seen behind, the front one well worn, the last barely touched. An intact mammilla is seen bounding each of the rear valleys at the outside, and a considerable quantity of crusta petrosa fills up the valleys. There is no indication of a longitudinal bisecting line along the crown. The enamel is very thick and resembles that of the upper jaw, speci-				

		men No. 2, also from Ava. Length of fragment, ... 12 Height at front at commencement of diasteme, ... 7,4 Height of jaw to inner margin of alveolus behind, ... 6,6 Diameter of jaw behind at bulge of coronoid, ... 6,7 Length of molar, ... 9 Greatest width behind, ... 4				
A/17	Mastodon ——— ?	Specimen consisting of a mutilated fragment of upper jaw right side, with part of two molars, the crowns entirely broken off and shewing only the ivory of the fangs, which is jet black and the whole specimen strongly infiltrated with iron; the hindmost molar appears to have been of very large size.	Ava ?	...	...	No mark or information.
A/18	Elephas (Stegodon) Cliftii.	Fine fragment comprising the two posterior ridges and talon of last molar, lower jaw right side, ridges all unworn, and a thick mass of crusta petrosa is seen in front of the first ridge; belonged to an animal of large size. In thickness of enamel and low height of ridge approximates closely to mastodon latidens, surface of enamel very rugose.	Ditto.	...	Col. Burney	Found in Jas. Princep's private collection.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A 19	Elephas (Stegodon) Cliftii.	Fragment of ivory tusk of small diam: section shews engine-turning.	Ava.	...	Col. Burney	No mark.
					...	No mark.
20	Ditto.	Ditto ditto deeply grooved, belongs to near tip, well engine-turned.	Do.	...	...	No mark.
21	Ditto.	Ditto ditto, weathered and concentric laminæ.	Do. ?	...	...	No mark.
22	Ditto.	Ditto ditto, oval section.	Do. ?	...	...	No mark.
23	Rhinoceros.	Fine fragment comprising the lower half of the right humerus with the articular surface very perfect, an old animal, very nearly of the size of the Sumatran Rhinoceros.	Do. ?	...	...	No mark.
24	Ditto.	Lower end of radius right side, shewing the articular surface with part of the shaft of very large size. Width of articular head being 5,7 inches: Antero-post. diam. 3 inches.	Do. ?	...	...	No mark.
25	Ditto ?	Fragment of Os. innominatum of large size.	Do. ?	...	...	No mark.
26	Ditto.	Axis, a good deal mutilated, shewing the greater part of the body but the apophyses broken off, posterior articular	Do. ?	...	...	No mark. The mineral condition and wearing like some of the

		surface cap-shaped, odontoid process thick and massive, belonged to an animal of large size.				Perim Island fossils.
A/27	——— ?	Acetabulum too mutilated for determination, considerable size with iron coloured matrix.	Ava ? or Perim ?			
28	Mastodon	Proximate phalanx of hind leg, very thick and massive, highly coloured with iron infiltration.	Ava.	...	Col. Burney	No mark.
29	Do.	Mutilated fragment of a large massive acetabulum in two pieces black and heavy like a mass of iron.	Ava.	...	...	No mark.
A/30	Mastodon	Dorsal vertebra, apophysis broken off: body compressed and shewing very approximated costal articulations. Transverse diameter of body 3,8 inches, Antero. post. diam. 3,5 inches, thickness 2 inches. Very small for a proboscid. vertebra; highly infiltrated with iron.	Ava.	...	...	No mark.
A/31	Hippopotamus.	Small mutilated fragment of upper maxill. with half of one molar, too imperfect for further determination.	Ava.	...	...	Do.
22	Do.	Fragment of lower jaw, shewing one molar of which the crown is broken off, fangs only remaining.	Do.	...	...	Do.
33	Ruminant.	Top of radius right side with portion of shaft, the articular surface shewing triple depression, of moderate size.	Do.	...	...	Do.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A/34	Do.	Lower end of tibia, moderate size, articular surface partly broken off.	Ava.	...	...	No mark.
35	Equus.	Inferior molar, very much compressed, probably a milk tooth.	Do. ?	...	...	Do.
36	Ruminant.	Fragment of frontal, left side with base of horn core attached, size of a large antelope.	Do.	...	...	Do.
		REPTILIA.				
37	Crocodilus.	Posterior angle lower jaw, left, with part of articular surface.	Do. ?	...	...	Do.
38	Leptorhyncus.	Fragment of left lower jaw, containing alveoli of three teeth.	Do. ?	...	...	Do.
39	Do.	Lower jaw, posterior part of symphysis, of slender proportions.	Do.	...	...	Do.
40	Crocodilus.	Occipital bone with condyle detached.	Do.	...	...	Do.
41	Do.	Mutilated fragment of cranium.	Do.	...	...	Do.
42	Leptorhyncus.	Muzzle portion right side, containing two teeth.	Do.	...	...	Do.

A						
43	Crocodilus.	Lower jaw right, near symphysis, containing four teeth, too mutilated for further determination.	Ava ?	...	..	No mark.
44	Do.	Another fragment of ditto containing three alveoli.	Do.	...	...	Do.
45	Leptorhyncus.	Lower jaw, left, behind symphysis with four empty alveoli.	Do.	...	...	Do.
46	Crocodilus.	Mutilated fragment of cranium.	Do.	...	...	Do.
47 to 60	Do.	13 Dermal scutes entire or in fragments.	Do.	...	...	Do. Some of them look like Sewalik specimens.
61 to 92	Chelonians. Emys.	Fragments of carapace and plastron, some of them of species of large size.	Do.	...	...	No mark.
93	Testudo.	Fragment of anterior portion of surface near margin above neck of a small species.	Ava ? More likely Sewalik from mineral appearance.	...	...	Do.
94 to 99	Do.	Fragments of surface and plastron judged to be so from the depth of the impression.	Do.	...	..	Do.
100	...	Fragments of plastron.	Ava.	...	...	No mark.
101	Emys ?	Fragments of surface and plastron.	Do.			Do.
102		Ditto.				
103		Ditto.				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A 104 to 165	Trionyx (Gymnopus.)	Fragments of carapace and plastron of various sizes.	Ava.	...	...	No mark.
166 to 173	Trionyx (Gymnopus.)	Fragments of carapace and plastron, very large size.	Do.	...	...	Do.
174 to 176	Do.	Vertebral portions of carapace, vertebræ attached.	Do.	...	...	Do.
177 to 191	Do. (Cryptopus.)	Various fragments of carapace and plastron, some indicating animals of large size.	Do.	...	...	Do.
192 to 194	Trionyx.	Fragments of plastron.	Do.	...	...	Do.
195	Emys.	Fragments of plastron.	Do.	...	...	Do.
196	Colossochelys atlas.	Part of carapace.	Do.	...	...	Do.
197 198 199	Crocodilus.	Fragments of scutes.	Do.	...	...	Do.

200 to 239	Crocodilus and Leptorhynchus.	Various Vertebræ.	Ava.	...	...	No mark.
240	Crocodilus.	Tooth.	Do.	...	...	Do.
241	Colossochelys atlas ?	Crushed fragment of shell, highly impregnated with iron.	Do.	...	...	Do.
242	Ruminant.	Metatarsus, inferior extremity of, size of Bos.	Do.	...	...	Do.
243	Do.	Compound bone of tarsus.	Do.	...	...	Do.
244	Hippopotamus.	Lower jaw, horizontal ramus, containing two molars a good deal injured.	Do.	...	...	Do.
245	Rhinoceros.	Detached molar, very much worn and mutilated.	Do.	...	...	Do.
246	Do.	Distel extremity of metatarsal of large size.	Do.	...	...	Do.
247	Trionyx.	Vertebrary piece of carapace.	Do.	...	...	Do.
248 249	Do.	Two fragments of shell.	Do.	...	...	Do.
250	Leptorhynchus.	Cracked and mutilated fragment of the upper maxilla, both sides containing nine teeth, crowns broken off: of a large sized animal.	Ava ?	...	...	No mark or No. and doubtful if Ava or Perim Island.
251	Crocodilus.	Fragment of lower jaw with three alveoli, much mutilated.	Ava ?	...	...	Ditto.
252	Do.	Fragment of cranium of ditto.				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A						
253	Emys ?	Fragment of carapace of very large Emys.	Ava ?	...	...	Very doubtful if Ava.
254	Crocodilus.	Mutilated lumbar vertebra.	Ava.	...	...	No mark or No.
255	...	A vertebra with a compressed body like No. 204, neural arch remaining, but most of the apophyses broken off.	Do.	...	Col. Burney	From one of J. Prinsep's wall cases: and remarkable as being the only one of Col. Burney's 435 specimens having a label! !
256	Crocodilus.	Upper extremity of a large humerus left side, articular head broken off. Had belonged to an animal of large size.	Ava ?	...	...	Inferred to be Ava from the ferruginous infiltration.
257	Do.	Fragment of lower jaw ? mutilated and no alveolar portion shown.	Ava.	...	...	
258 to 260	?	Three mutilated ends of bone, too imperfect for determination.	Ava ?	...	...	
261	?	Another ditto like No. 258.	Ava ?	...	...	
262	Crocodilus.	Fragment of the coracoid bone of a crocodile.	Ava ?	...	...	

263	?	Fragment of leg bone with an articular surface, but not sufficiently distinct for exact determination. An upper end of radius of Rhinoceros ? Highly infiltrated with iron.	Ava ?	...	...	In mineral condition exactly like Perim Island specimen No. 109.
264, 265	...	Two fragments of vertebræ of smaller size, much mutilated, and undetermined.	Ava ?	...	...	No mark or No.
266	Ruminant.	Fragment of horizontal ramus lower jaw, containing the last molar of the size of a Bovine species, much mutilated and crown of molar broken.	Ava ?	...	...	No mark or No.
267	Crocodilus.	Small fragments of cranial bone.	Ava.	...	Unknown.	No mark.
268 to 270	? ?	Mutilated fragments of bone in mineral condition like No. 30.	Ava ?	...	Do.	Inferred to be Ava from mineral condition.
271 to 278	...	Mutilated fragments undetermined.	Ava ?			
279	? ?	Lower end of a tibia with portion of shaft, of small size, articular surface mutilated.	Ava ? or Perim ?	...	Do.	Very doubtful if Ava.
280 to 286	...	Two articular ends of ribs, portion of core of horn (No. 285,) and various bone fragments mutilated and undetermined.	Ava ?	...	Do.	No mark or No.
287	...	Fragment of cylindrical bone, articular heads gone, and much mutilated, but shewing a deep tendon pulley at one end.	Ava ?	...	Do.	No mark.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
A 288	?	Fragment of ——— ? ?				
289 to 293	...	Various mutilated fragments undetermined.	Ava ?	...	Unknown.	No mark.
294	Ruminant ?	Lower end of a small radius.				
295 to 302	...	Various mutilated fragments left undetermined.	Ava ?	...	Do.	Do.
303	Hippopotamus Hexaprot. Iravaticus ?	Lower end of left radius detached from the shaft and ulnar extremity broken off, of small size, and corresponding very closely with the specimen figured in the Fauna Antiqua Sivalensis Pl. fig. This specimen is notable as being one of the very few referable to Hippopotamus contained in the Ava collection.	Ava.	...	Col. Burney ?	So inferred from the ferruginous matrix and form differing from the Sewalik species: no mark or No.
304	?	Middle portion of shaft of a cylindrical bone, articular heads broken off.	Ava ?			
305	Crocodilus.	Detached head of the scapula of an animal of considerable size, in mineral condition differing from the Ava specimens generally.	Ava ? or Sewalik Hills ?	...	?	No mark or No. very doubtful if from Ava.

	?	Mutilated dorsal vertebra.	Ava	?	...	?	No mark. Origin doubtful.
306	Elephas or Mastodon	A portion of the shaft of a large femur, both ends broken off and mutilated.	Ava	?	...	...	No mark or No. Doubtful if Ava or Perim Island.
307	Hippopotamus Iravaticus	Lower end of left femur, shewing the articulating condyles and a part of the shaft, both much weathered and the surface abraded, so as to render the character indistinct. The bone is proportionally of much smaller size than Hippopotamus Sivalensis, and would thus agree with the dimensions of the radius No. 303, and with specimens assigned to Hippopotamus Iravaticus in the Fauna Antiq. Sival. The shaft is slender.	Ava	?	...	?	No mark or record, the specimen is black from iron infiltration and very heavy.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/1	Mastodon Sivalensis	Fine specimen of the upper maxilla left side, comprising the greater portion of the palate and two molars embedded in the jaw, with four empty pits, marking the situation of the fangs of the second milk molar which had fallen out. The third milk molar is shewn nearly entire, with the enamel crown broken off at the outside of the first two ridges, and the first three ridges are seen to be touched with wear forming depressed cups. The crown of the tooth is bisected longitudinally into an outer and inner division, and the groups of mammillæ are seen to alternate instead of being transverse with accessory mammillæ in the valleys. This is the normal character of the species distinguishing it alike from *M. latidens* and *M. Perimensis*. The surface of the enamel is deeply grooved vertically so that the ridges when worn down present a very complex pattern. Behind the fourth ridge is a talon consisting of a complicated group of small mammillæ. To the rear of	Sewalik Hills.	...	Unknown.	The matrix, of which but little remains, is somewhat ferruginous, but it differs from the usual condition of the Ava matrix. Another specimen of nearly the same age is described below (No. 13,) but comprising both jaws.

		this tooth, the anterior portion of the first true molar is visible in germ, and the posterior part of it still concealed in the alveolus; it shews three ridges, presenting the same complex form as the anterior tooth, but is very considerably larger in every proportion. The four empty fang cavities in front are nearly square shewing that the crown of the tooth had a similar form, viz., that it was short and broad; these cavities are well apart from each other. Extreme length of fragment, ... 7, Height from molar surface in front to upper edge of fracture, ... 4,3 Length of crown of third milk molar, 3,2 Width of ditto in front,..... 1,8 Ditto ditto behind,..... 2,1 Ditto of back molar at third ridge, .. 2,5 Length of alveolar space of second milk molar (fallen out,)..... 1,2 Width of ditto in front,..... 1,3 Ditto ditto behind,..... 1,5 This is a very important specimen from shewing so much of the early dentition. It is evidently a young *M. Sivalensis*, but there is nothing to indicate the locality whence it came.				

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/2	Elephas insignis.	A large adult skull, cranical portion from behind orbits perfect, shewing the whole of the forehead and occipital regions; the zygometic fossæ, both orbits in part, the incisive bones mutilated, but shewing the alveoli of two large tusks, also two molars on either side in the jaw. The crown of the front molar broken off; the rear one in germ shewing eleven intact ridges. Greatest width behind, ... 2,5 Length from upper part of occipital to commencement of anterior molar, 2,7 The size and form of nasal opening is also shewn.	Sewalik Hills.	...	...	No information as to its origin. Purchased at Tulloh and Co., auctioneers, where it had been for many years. The matrix is entirely of the Sewalik Hills. The upper end of the Tibia of Sivatherium (specimen No.) was purchased at the same time.
3	Do.	Mutilated cranium of a younger animal than No. 2, shewing the two anterior true molars in situ on each side, and the empty alveolus of the germ of the last. The two maxillary bones, the left orbit and zygometic fossa, nearly the whole of the occiput, condyles and foramen magnum with the right glenoid articulating surface nearly entire. The other portions	Do.	...	Col. Colvin ?	The matrix of this specimen is entirely that of the Sewalik Hills. No mark or information.

		more or less broken. This cranium belonged to a middle-aged animal and shews well the peculiar characteristic form of the head. The cancelli and nasal fossæ are filled with hard sandstone matrix.				
4	Elephas insignis.	Mutilated skull having the superior maxillaries, part of left orbit, left incisive alveolus, part of left temporal fossa with the nasal opening and inter incisive fossa more or less entire. The occiput broken off exposing the cerebral cavity. The other parts wanting. The teeth in the jaw are beautifully preserved on both sides; the anterior is well worn, being most perfect on the left side, where it shews the remains of six ridges, the anterior portion being worn off. The posterior molar on each side is protruded but intact, except upon the apices of the first ridge, and shews on either side *seven* ridges and a small talon. The ridges are very convex shewing no trace of bisection. This tooth is the penultimate of the upper jaw, and the specimen shews it in the most characteristic form. The incisive sheath of a tusk on the left side, nearly perfect to the extremity, is seen projecting beyond the plane of the anterior molar. Matrix, Sewalik Hill sandstone.	Sewalik Hills.	J. A. S. Vol. X. p. 623, pl. fig. c. (Piddington.)	Col. Colvin.	No mark or information.

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/5	Elephas insignis.	Fine fragment, consisting of the upper maxilla right side, shewing two teeth in situ. The anterior, being the first true molar, shews seven ridges and a heel, the first ridge more or less worn. The posterior molar (which is the penultimate) is in the state of germ and shews only five ridges. The posterior portion is broken off. The matrix and weathering are those of the Sewalik Hill specimens. Memo. This specimen with the teeth in the three crania Nos. 2, 3 and 4, shews the whole of the dentition of the true molars of the upper jaw in *Elephas insignis*, namely, the penultimate and antipenultimate having *seven* ridges and a heel, the last true molar *ten* ridges and a talon.	Sewalik.	...	Col. Colvin ?	
6	Elephas (Stegodon) insignis.	Fine fragment consisting of a nearly entire upper molar with the three front ridges worn, the posterior ridges entire. It shews seven ridges of which the last has been partially broken off, but the entire fang indicates the boundary of the tooth.				

		The accessary ridge in front is also partially broken off. A large quantity of thick cement fills the posterior valleys and sheaths over the mammillæ. It is the penultimate, upper jaw, left side and a very characteristic specimen.				
7	Elephas insignis.	Beautiful specimen of the upper maxilla, right side, of a very young animal, shewing the second milk molar nearly entire in situ with the fang cavities of an anterior milk molar in front. Also the lower half of the alveolar canal with some of the outer laminæ of the tusk adhering to it. The tusk for the age is of very large size, probably indicating the animal to have been male. The end of the alveolus of the third milk molar is seen behind, but no part of the tooth. The specimen includes also the palatine portion of the maxillary bone and part of the jugal apophysis of the same bone. The specimen is a good deal covered with argillaceous matrix which conceals the surfaces of the bone. Length of fragment,..... 4,3 Length of molar, ... 2,7 Width at second ridge, ... 1,35 Greatest width behind, ... 1,6 Height of crown at fifth ridge, ... 1,	Sewalik.	...	Col. Colvin.	

.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/7		The enamel of the ridges is deeply grooved vertically, forming sinuous folds upon the plane of wear. The first five ridges are more or less worn, shewing that the tooth had been in full wear; the last ridge intact, exhibiting the tips of five mammillæ. Diameter of alveolus of tusk,..... 1,2 This is a very valuable and instructive specimen, as it regards the early dentition. It corresponds very closely with the specimen figured pl. 19, fig. 1, of Faun. Ant. Siv., but is still more perfect.				
8	Elephas insignis.	Fine specimen comprising the anterior half of the horizontal ramus, lower jaw, left side, of a young animal corresponding very nearly in age with No. 7, and shewing the same teeth. It is broken off vertically in front near the Symphysis, and behind posteriorly to the molar. It shews the second milk molar in situ nearly entire, with the first five ridges more or less worn, the last ridge barely touched. The two first ridges partly	Sewalik Hills.	...	Col. Colvin ?	A valuable and instructive specimen.

		broken off. The tooth is the second milk molar and it agrees so exactly in every respect in form and characters with the corresponding tooth of No. 7, that it is unnecessary to give details: it might even have belonged to the same animal. Two empty fang pits of the fallen out first milk molar are seen in front. Length of specimen, ... 5, Height of jaw to alveolar margin, at first milk molar, ... 3,2 Thickness of jaw behind,..... 2,7 Length of molar, ... 2,7 Width of crown at second ridge, ... 1,05 Ditto ditto, behind,..... 1,6 It will be seen from the last measurement that the tooth contracts from behind forwards very considerably.				
9	Elephas insignis.	Fragment of the posterior portion of a very large molar shewing four ridges and a heel; the tooth probably belonged to the upper jaw. A great quantity of cement behind the last ridge and the heel. Length of fragment, ... 5,3 Width of crown,..... 3,9	Sewalik Hills.	...	Col. Colvin ?	Specimen too mutilated to be determined with certainty.

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/10	Elephas (Stegodon) bombifrons.	Fragment comprising the upper maxillary left side containing a large tooth in situ, the greater part of the outer surface of the maxillary is shewn vertically, together with the extremity of the pterygoid apophysis behind the alveolus. The posterior half of the crown of the tooth is broken off, leaving only four wide disks of wear in front. The first ridge is entirely worn out, and the tooth must have belonged to a very large-sized adult animal, for it appears to have been the last true molar. Entire length of tooth, ... 9,7 Width of crown at fourth ridge, ... 4,1 Breadth of ivory disk of second, ridge 1,2	Sewalik Hills.	...	Col. Colvin ?	Doubtfully referred to this species.
11	Elephas insignis.	Fine fragment of the last molar, upper jaw, left side, shewing five ridges in a state of germ and wholly untouched by wear. The crusta petrosa of the last valleys had not yet been deposited, and the form and connexions of the mammillæ of the ridges are well shewn. The base of the molar is attached to a micaceous greyish sandstone.				

12	Elephas insignis.	Fragment of one of the middle true molars, lower jaw, left side, shewing five ridges. It is broken off in front and behind, the ridges are high, presenting the characteristic form of the species. The tooth was probably the antepenultimate.				
13	Mastodon Sivalensis	Fine specimen shewing the upper maxilla, both sides, with the last milk molar and first true molar in situ, closely resembling specimen No. 1. The specimen is broken lengthways along the palate into two fragments, and it is a good deal covered with sandstone matrix. The anterior molar on the left side has the greater part of the crown hammered off by attrition. On the right side, what remains of it shews disks of considerable wear. The back molar on either side is in a state of germ. It resembles No. 1 so closely, that further details are unnecessary.				
14	Elephas insignis.	Portion of a molar tooth comprising three ridges broken off in front and behind, ridges intact and covered with cement. Belonged to a tooth of large size.	Sewalik Hills.	...	Col.Colvin ?	
15	Do.	Fragment of molar consisting of four ridges broken off in front and behind, a good deal of matrix upon it : also of large size.	Do.	...	Do.	

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/16	Elephas insignis.	Lower jaw, left side, comprising the posterior part of horizontal ramus and the thick part of the ascending ramus, shewing part of two teeth in situ. The posterior fang alone of the front tooth is visible. Six ridges of the hind tooth have emerged, the rest being concealed behind; the anterior two ridges only are touched by wear; the ridges are convex across in the usual manner of the species, with a great quantity of cement. It is inferred to be the penultimate, from the narrowness of the tooth in front, indicating it to be the first true molar.	Sewalik Hills.	...	Col.Colvin ?	
17	Do.	Fragment consisting of the anterior half of horizontal ramus, lower jaw, right side, broken off in front near the symphysis, and behind about the middle of the jaw, containing five ridges well worn of an old molar, probably the last.	Sewalik Hills.	J. A. S. vol. 6. p. 199.	Cond. Dawe	No number can be made out.
18	Elephas (Stegodon) ——— ?	Lower jaw, left side, comprising portion of the horizontal ramus, broken off in front, obliquely backwards near the symphysis so as to shew a portion of the diosteum,	Sewalik Hills.	...	Col.Colvin ?	

		and shewing the whole length of the last molar of a very old animal. The age is shewn by the whole of the ridges along the inside having been worn out into a confluent disk which is depressed and sinuous. The outer enamel margin of the last three ridges remains. Mentory foramen large. This is a highly instructive specimen, in shewing the condition of wear to which the teeth are brought in extreme old age.				
19	Elephas (Loxodon) planifrons.	Fine fragment, comprising the superior maxillary left side, detached with two molars in situ, and the greater portion of the palate; broken off behind immediately to the rear of the posterior border of the palatum, and in front near the commencement of the diastema. The anterior tooth is well advanced in wear and shews about seven ridges, the two anterior of which have been ground down to a common disk. The plates are expanded somewhat in a lozenge form in the middle. The enamel for an elephant is thick and a good deal waved (or plaited) in this specimen; the crown is very broad, the talon consists of about	Sewalik Hills.	...	Col. Colvin ?	This is the largest specimen of upper jaw of this species in the Society's collection. An entire cranium is a desideratum.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/19		four mammillæ. The posterior molar is broken off in a line with the posterior border of the palate, and only shews four very thick ridges which are in germ and completely covered over with cement. The greater part of the section of the tooth shews the low elevation of the ridges characteristic of *E. planifrons* and the other Loxodons. This specimen is much weathered, and there is hardly any matrix upon it. *Dimensions.* Length of fragment, ... 1, Ditto anterior molar, ... 7, Greatest breadth of crown of ditto, .. 3,8 Height of crown behind at the last ridge inside of ditto, ... 2,9 Length of fragment of last molar .... 5,3 Height of second ridge of ditto, ... 4,2 Width of last ridge of ditto measured at the section, ... 3,9				

20	Elephas planifrons.	Fragment comprising upper maxillary right side, detached, containing one much worn molar in situ, surrounded by a complete alveolar margin, and shewing seven ridges in an advanced state of wear, with one large ivory disk in front indicating the remains of three worn out ridges (total 10.) The detrition had reached the very base of the crown. The disks of the ridges are expanded in the middle, but the bounding enamel plate is entirely free from any indication of plaiting, owing to the wear having reached the base, where the flexures are less numerous. This is a highly instructive specimen with regard to the characters presented by the teeth in old age. The molar appears to be the last of the series and to have belonged to a small-sized animal, probably a female. The cancelli are filled with sandstone matrix, very little of which is on the surface of the specimen.	Sewalik Hills.	...	Col. Colvin ?	
21	Do.	Fine specimen, lower jaw, left side, comprising the greater portion in length of the horizontal ramus, broken off in front about the middle of the diastema, and in rear behind the offset of the coronoid apophysis, with two molars in situ. The *first*	Sewalik Hills ? or Ava ?	...	Unknown.	No mark or information.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/21		is entire, being surrounded by the alveolar border and shews seven ridges, the two anterior of which have their surface broken off; the rest with the exception of the last being more or less worn; the ridges shew the disks expanded in the middle with very thick enamel plates, which are nearly free from plaiting, and the mammillæ appear to have been thick and few in number, there being five to the last ridge. This tooth appears to be the antepenultimate or first true molar—inferred from the comparatively small size of the jaw indicating a young adult, and from the small size of the tooth and the one behind it. The *second* is broken off about the middle and is entirely in germ, no part of it having emerged above the border of the alveolus; it shews the greater part of six ridges; the mammillæ are few in number and of large size and with very thick enamel, nearly as thick as in the stegodons: one mentory foramen is visible. This is a highly instructive		...		

		specimen both as regards the middle-aged dentition and as shewing the transition into the stegodons, the enamel being very thick and the ridges comparatively low. *Dimensions.* Length of specimen, ... 1—1,5 Ditto of anterior molar, ... 6, Width of crown in front, ... 2, Greatest width at fifth ridge, ... 3, Length of fragment of posterior molar, 4,7 Width of base of crown of last ridge, 3,5 Height of enamel plate of fourth ridge, 2,9 The specimen is entirely cleared of matrix, but is weathered into the reddish ochreous colour common in many of the Ava specimens. But unluckily there is no information as to whence it came.				
22	Elephas (Loxodon) planifrons.	Fine fragment of the lower jaw comprising nearly the whole of symphysial portion of both sides, the beak of which is slightly broken off: the whole of the horizontal ramus and greater part of ascending ramus right side: the condyle and coronoid apophysis alone are wanting. Two molars are contained in the jaw. The *anterior* one is well worn, shewing about six ridges and a heel; the three anterior	Sewalik Hills.	...	Col. Colvin ?	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 22		ridges being ground down into one common disk and the three posterior also worn down close to the base of the crown. The disks of wear are wide and a little expanded in the middle, the enamel thick and with very little tendency to plaiting. The *posterior* molar shews six ridges emerged from the alveolus, the two anterior of which are slightly abraded, the rest being quite intact and covered over with a large quantity of cement. It is not apparent how many ridges more are contained in the back part of the alveolus. Both molars exhibit the characteristic form of *Elephas planifrons* in a well-marked manner. *Dimensions.* Extreme length of fragment, ... 1—9,5 Height of jaw to the surface of anterior ridge of first molar, ... 7,7 Ditto behind to third ridge of second molar .... 7,5 Length of front molar, ... 5,3 Greatest width of crown of ditto, ... 3,6				

		Length of emerged part of second molar, ... 5,5 Length of diastema from anterior border of penultimate molar to upper edge of extremity of symphysis, ... 7, The characters of the anterior part of the jaw differ very considerably from those of the existing Indian Elephant. In the latter, the diastema descends nearly vertically from the anterior extremity of the molar, and the beak is very short and the outline of the two rami is rounded, whereas in the fossil the diastema descends obliquely forward at an acute angle with the inferior border of the ramus entailing a long spout to the symphysis and this part of the ramus is thickened and much swollen out. So that the outline forms a narrow oval, instead of being round. In these respects it resembles the African Elephant, but the symphysial portion is still more elongated than in that species. The inferior border of the jaw is considerably arched anteriorly, five scattered mentory foramina visible, the largest being at the base of the beak.				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
$\frac{S}{23}$	Elephas (Loxodon) planifrons.	Fine specimen, consisting of both rami of the lower jaw united at the symphysis, partially imbedded in a block of sandstone. The left ramus broken off behind the offset of the coronoid apophysis. The right ramus broken off a little more anteriorly. The teeth on the right side are concealed by matrix. The *anterior* molar of the left side is much worn and reduced in length; it shews the remains of about five ridges, the anterior of which are confluent; the enamel plates of the back ridges shew the usual character, being little plaited; seven-half ridges of the posterior molar are emerged from the alveolus, the three anterior being more or less worn, the others intact and covered over with cement. The outline of the symphysial portion is oval as in the preceding specimen, but the diastema is less elongated, the form of the spout being nearly the same. Five mentory foramina are seen on either side, the first and last being larger than the rest. The rami diverge	Sewalik.	...	Col Colvin ?	

		and curve outwards as they run back assimilating to the African Elephant. The two molars in the specimen are considered to be the penultimate and last. In conjunction with No. 22, this specimen nearly supplies the whole of the lower jaw of *E. planifrons*.				
23	Elephas (Loxodon) planifrons.	Fragment of lower jaw, left side, comprising the greater portion of the horizontal ramus, containing one tooth in situ, which is well worn; it shews about ten ridges and appears to be the last true molar. The disks of wear are rather narrow with very thick unplaited enamel and the crown is broad; two of the anterior ridges broken off. Length of molar ..... 9,5 Greatest width of crown, ... 4, There is hardly any matrix on the specimen except a little conglomerate in the coronoid region; but the specimen has a good deal of the colour and weathering of the Ava specimens.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Unknown.	Bears an ink mark No. 41, to which no reference is known. Is most probably from Col. Colvin, but No. 41, of Bak. and Dus. Cat. (Jour. Vol. V. p. 182,) is an upper jaw, right side.
24	Do.	Lower jaw left side, comprising the greater portion of the ramus on to the symphysis with one molar in situ nearly entire, the latter with about ten ridges the last three of which are untouched and covered	Sewalik Hills ?	...	Col. Colvin ?	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/21		with cement, the rest well worn. The symphysial and diastemal portion of this specimen is elongated and gibbous, resembling closely specimen No. 22. Length of molar, ... 9,7 Greatest width of crown, ... 4,7 This tooth was probably the last true molar.				
25	Elephas Loxodon planifrons	Fragment comprising horizontal portion of the ramus with a part of the diastema and symphysis, and broken off at the coronoid, containing one nearly entire tooth in front shewing about nine ridges, and the first ridge of a tooth behind. These are probably the ante-penultimate and penultimate of the left side, judged to be so from their size and that of the jaw.				
26	Do.	Fragment of a posterior molar, comprising three ridges well worn, probably the last.				
27	Do.	Fine specimen, comprising the greater part of the horizontal ramus, broken off at the anterior part of the symphysis in	Sewalik Hills.	...	Col. Colvin.	

12		front and to the rear of the coronoid behind, containing two molars in situ, which are estimated to be the remains of the ante-penultimate and the penultimate. The specimen is chiefly remarkable for the excessive prolongation of the diastema and symphysis, which is much greater even that that shewn in specimen No. 22, confirming the inference that it is a constant character in the species. The line of diastema instead of descending nearly vertically as in the Indian Elephant runs forward at a very obtuse angle with the plane of wear of the molar. The mentory foramina have the same relative situation as in No. 22. The anterior portion of the symphysis is dislocated internally by a transverse fracture, the shift forming a step ; this had occurred in the rock. The posterior part of the alveolus is removed, so as to expose the extremity of the tooth. *Dimensions.* Length of fragment, ... 1—6, Length of back molar,. . . . . 9,5 Width of crown of ditto,. . . . . 3,25 Length of diastema to broken extremity of symphysis, ... 9,2				

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/28	Elephas Hysudricus.	This is a weathered specimen denuded of matrix. It is highly instructive as it regards the teeth and form of symphysis. Mutilated cranium broken across about the middle of the sheath of the incisive bones with the loss of the whole of the frontal, temporal and occipital region; perfect in the left maxillary, the whole of the palate, posterior part of diastema on both sides, and the inferior part of the incisive bones; the right maxillary broken off obliquely outwards from the inner margin of the alveolus, the fracture having removed the greater part of the molar of that side; the posterior opening of nasal fossa entire. Two molars on the left side, the anterior perfectly entire shewing ten ridges, the eight anterior of which are more or less worn but none of the disks confluent. The enamel plate of the front accessary ridge also remains. The disks of the three anterior ridges have the enamel a good deal plaited with a narrow loop in the middle. The next	Sewalik Hills.	...	...	This specimen is a good deal shivered and requires care in handling, to prevent its being broken into pieces. Memo. The fragments Nos. 64 and 65 were subsequently found to join and form the anterior molar, right side: the entire posterior molar of the same side was also found, so that the jaw has now been restored, shewing two molars on each side. The specimen (a very valuable one) appears to have been present-

		three ridges have their digital extremities worn into three distinct divisions, and the mammillæ of the posterior ridges are distinct. The enamel is thick as compared with the Indian Elephant but less so than in *E. planifrons*. The crown of the tooth forms a narrow oblong with little obliquity in the place of wear. Of the posterior molar all the plates are in germ and concealed by the pterygoid bone, the three anterior alone being exposed by a fracture. They are seen to be very much deeper than in *E. planifrons* and to be curved forwards at the apex. The section of the incisive bones shews that the tusks were about medium size, namely four and a half inches in diameter. *Dimensions.* Length of palate from broken extremities of incisives ..... 1 0, Width of palate in front, ... 3, Ditto behind, ... 4, Length of anterior molar (penultimate,) ..... 8, Width of crown in front ..... 3,1 Ditto in middle, ... 3,7 Ditto behind, ... 3,5				ed entire, and the shivered fragments have been collected by the merest chance from all parts of the ground floor.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/28		Estimated length of last molar, ... 11,5 Height of second plate,..... 4,7 This is the only portion of the cranium of this species of considerable size contained in the collection. The molars are inferred to be the penultimate and last. They shew well the characters of the species as distinguished from *E.planifrons*.				
29	Elephas Hysudricus.	Mutilated fragment comprising the middle portion of the cranium broken off vertically behind at the posterior margin of the orbit and through the diastema in front shewing the greater part of the maxillary with two teeth on the right side and a part of the orbit, together with the infra orbitary foramen; also the section of both tusks and the intermaxillary fossa. The whole of the palate and the alveolar portion of the left maxillary broken off. Of the anterior tooth, which appears to be the first true molar, eight ridges remain, all of them more or less worn; it is of comparatively small size. The posterior tooth is broken vertically				

		through the middle of the fifth ridge, the plates are all in a state of germ and shew well the distinct digitated terminations of the mammillæ. *Dimensions.* Length of the anterior right molar,.. 5, Width of ditto in front, ... 2,5 Ditto behind,..... 2,1 Length of fragment of posterior molar, 3,5 Width of crown at sixth ridge, ... 3, Height of ditto,..... 4, Vertical diameter, left tusk,..... 5, Transverse ditto, ditto,..... 4,4 This is inferred to have been the remains of an adolescent animal, and from the size of the tusks a young male.				
30		(*Transferred from No.* 18 *Ava.*)				
31	Elephas insignis.	Fragment of upper jaw left side, detached, containing one entire molar in situ, which shews nine ridges and a small heel; the four anterior ridges well worn, the rest intact and covered over with a thick coat of cement.	Sewalik Hills	J. A. S. Vol. V. p. 185 No. 26.	Col. Colvin.	Marked No. 26, belonging to Col. Colvin's 2nd despatch.
		The crown is a good deal broken behind.	Do.	...	Do.	
32	Do.	Fragment comprising six ridges of the rear portion of the last true molar right side. The ridges are intact and covered with cement. Length of fragment, ... 7,8				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 33	Elephas insignis.	Fragment of molar, comprising part of four ridges mutilated, with a small portion of bone attached.	Sewalik Hills.	...	Col. Colvin.	
34	Do.	Fragment of molar, broken in front and behind, shewing part of five ridges the last four ridges intact.	Do.	...	Do.	
35	Do.	Worn fragment of molar, shewing part of three ridges.	Do.	...	Do.	
36	Do.	Fragment, comprising the anterior portion of horizontal ramus, lower jaw, right side; broken off in front about the middle of the diastema and behind on a line with the coronoid apophysis, containing the greater portion of a molar in situ. Eleven ridges visible, all more or less affected by wear; the five anterior, instead of being transverse run obliquely across from without forwards; the disks of wear are narrow with an expanded loop in the middle, and the enamel very much plaited. This tooth is probably the penultimate of the series. *Dimension.* Length of fragment, ... 10,0	Do.	...	Do.	

			Ditto molar, ... 7,5 Width of crown,..... 3,1 Height of last plate, ... 4,5 This is an instructive specimen shewing the characteristic marks of the teeth as distinguished from *E. planifrons* and *E. namadicus*.				
x	37	Elephas Hysudricus.	Fragment comprising the horizontal ramus of the lower jaw, right side, broken off at commencement of diastema in front and at the coronoid behind, containing the greater part of a large molar in situ; the anterior ridges of which are broken off, the four posterior enveloped by cement. Judging from the size of the jaw and the form of the crown, this is the last true molar of the series. About twelve ridges can be counted; the enamel plates, as seen on the surface of the crown, slope very much backwards and shew the characteristic large expanded loop in the middle. The enamel a good deal plaited. The tooth appears to have belonged to an old animal. Length of molar, ... 10,8 Width of crown in front, ... 2,1 Ditto in the middle, ... 3,5 No indication of pressure behind from a successionary molar.	Sewalik Hills.	...	Col. Colvin ?	

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/38	Elephas Hysudricus.	Fragment consisting of the anterior portion of the lower jaw, both sides, including the symphysis, imbedded in hard sandstone; the left ramus broken off vertically and longitudinally at the inner margin of the alveolus; the right ramus broken across about the middle, shewing part of a well-worn molar, of which about seven ridges are visible; the front ridges oblique, the disks of wear shewing the usual expanded loop in the middle and the enamel much and coarsely plaited. What is shewn of the symphysis and spout differs considerably in form from *E. planifrons*, the diastema being less elongated and descending more abruptly.	Sewalik Hills.	...	Col. Colvin ?	
39	Do.	Fine fragment of lower jaw left side, comprising nearly the whole length of the horizontal ramus on to the symphysis and the greater part of the ascending ramus, broken off a little below the neck of the condyle. The specimen is much crushed. The greater part of the length	Do.	...	Col. Colvin.	No mark or number.

		of the last true molar is seen in situ shewing about fourteen ridges, the twelve anterior of which are more or less affected by wear. The form of the crown plates exactly resembles that of specimen 38. Length of tooth,.. .. .. 10,5 Greatest width of crown, ... 3,8 Extreme length of fragment, .. 1— 10,25				
40	Do.	Fine fragment of the lower jaw, right side, comprising the greater portion of the horizontal ramus on to the symphysis and of the ascending ramus, broken off a little below the neck of the condyle; the remains of two molars are visible. Only the last fang of the anterior molar remains with a portion of the crown above it. This is inferred to be the last milk molar. The posterior tooth is nearly entire exposing seven worn plates, the other being enveloped by cement. *Dimensions.* Length of fragment, ... 1—4,25 Ditto *last* molar, about .. .. 6,7 Width of crown of ditto in the middle .. .. 3,9 The pattern of wear of the crown of the tooth in the adolescent jaw does not ex-				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/40		hibit the expanded enamel loop in the middle of the plates, nor much plaiting of the enamel. This is inferred to be owing to the detrition not having gone low enough: in these respects corresponding very closely with the anterior molar of the large upper jaw, specimen No. 28.				
41	Elephas Hysudricus.	Very fine specimen of the lower jaw left side, comprising the greater portion of the horizontal ramus broken off in front of the mentory foramen, and of the whole of the ascending ramus as high as the neck of the condyle; containing the last molar in situ, nearly worn out, and the whole length emerged from the alveolus; the anterior part of the tooth would appear to have been worn away: the remains of twelve ridges are visible, the first three of which are confluent into a continuous disk, all the rest except the two last are more or less affected by wear; the disks are narrow and the plates closely approximated, shewing little	Sewalik Hills.	...	Col.Colvin ?	

		plaiting of the enamel, and not much expansion in the middle, both these characters being inferred to be owing to the very advanced stage of detrition. *Dimensions.* Length of specimen from anterior fracture to posterior border of ascending ramus,. . . . . .. 1—5, Height from plane of lower border of horizontal ramus to summit of fractured condyloid apophysis,. . . . 1—5,7 Antero-posterior diameter of ascending ramus, ... 8, Vertical height of horizontal ramus, measured to outer margin of alveolar border, ... 7, Length of crown of molar, ... 8, Width of ditto in middle, ... 3,1 This is the most perfect specimen in the collection, so far as the lower jaw is concerned.				
42	Do.	Another specimen comprising the lower jaw left side, with nearly the whole of the horizontal and ascending rami so exactly like the last specimen No. 41, that they might have been taken for the opposite side of the same jaw, but that No. 41, is a trifle larger in dimensions.	Sewalik Hills. Nahun.	J. A. S. Vol. VI. p. 899. No. 12.	Conductor W. Dawe.	Marked No. 12.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/42		The condition of the grinding surface of the molar and its progress of wear are exactly as in the preceding specimen. The symphysial portion is a little more perfect shewing one large mentory foramen.				
43	Elephas Hysudricus.	Fine specimen, comprising the anterior part of the horizontal ramus, left side, broken vertically in front through the diastema, and containing two molars in situ, the greater part of the *anterior* molar (which is inferred to be the last milk tooth) is preserved, the crown well worn shewing about eight ridges, the most anterior of which are broken off; the enamel is well plaited with a loop expansion in the middle. Of the posterior molar only five ridges remain which had hardly come into wear, this is inferred to be the first true molar. One large mentory foramen is seen below the fang of the anterior molar. Length of fragment, ... 7,7 Height to margin of alveolus in front 5,8				

		Ditto behind,..... ..... 4,5 Length of crown of anterior molar, .. 3,7 Width of ditto about middle, ... 2, Ditto crown of posterior molar, ... 2,4 This specimen had belonged to a young adolescent.				
44	Elephas Hysudricus.	Water-worn fragment comprising the anterior half of left ramus of lower jaw, containing the remains of two molars in situ. The anterior, which is inferred from the size to be the last milk molar, presents seven ridges, but the crown is so much abraded, that the characters are not discernible. Two ridges of a successional molar are seen behind.	Sewalik Hills Nahun.	J. A. S. Vol. VI. p. 899.	Conductor Dawe.	Number of Specimen not determinable.
45	Elephas planifrons.	Mutilated fragment of head, comprising both maxillaries, the palate and diastema together with the nasal fossa shewing the vomer nearly entire. Two teeth are seen on each side; the anterior have their crowns broken off; the posterior in germ shewing about seven plates each, but much mutilated. These teeth are inferred to be the last milk and first true molar of an adolescent animal.	Sewalik Hills.	J. A- S. Vol. V. p. 182.	Col. Colvin.	Marked No. 60, B. and D.'s Cat.
46	Elephas Hysudricus.	Fragment of upper jaw, right side, comprising the remains of one large molar, of which ten ridges are more or less worn,	Do.	Do.	Do.	Marked No. 56, B. and D.'s Cat.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/46		inferred to be the last true molar of an old animal. The plates seem low for the species, but this is owing to their being seen only on the rear part of a last molar much advanced in wear.				
47	Elephas ——— ? Hysudricus ?	Mutilated fragment of lower jaw right side containing part of a large well worn molar, the crown of which is covered over with sandstone matrix.	Sewalik Hills.	...	Col.Colvin ?	No mark.
48	Elephas ——— ?	Mutilated fragment of lower jaw, shewing seven ridges of a broken molar.	Do.	...	Unknown.	No mark.
49	Elephas Hysudricus.	Fragment comprising lower jaw, left side, with the last milk molar in situ and the first ridge of the next successional molar in germ behind. The crown of the anterior molar is well worn, shewing deep plates with the enamel of the grinding surface much plaited; it shews seven ridges, partly broken off. From a half grown animal.				
50	Elephas planifrons.	Fine fragment of horizontal ramus, lower jaw, left side; a good deal mutilated at the lower border and broken off in front and behind. One very perfect tooth in	Do.	...	Col. Colvin.	No mark. Crown of tooth in fine preservation.

		situ, shewing seven worn ridges and an intact ridge behind. Inferred to be the first true molar. Length of tooth, ... 6,5 Breadth at second ridge, ... 2,7 Ditto behind,..... 3,1				
51	Elephas ——— ? Hysudricus.	Fragment of lower jaw left side, containing the greater part of a molar, the crown of which is broken off in front and behind, shewing seven ridges with two or three removed in front. Inferred to be the first true molar of a young adolescent animal. This specimen is remarkable for an abnormal gibbosity at the inferior border near the symphysis with a deep abrupt depression at the anterior inferior part of the bulge.	Sewalik Hills.	...	Col.Colvin ?	No mark. Very like the last in fossil condition.
52	Elephas ——— ?	Mutilated fragment of a symphysis, detached from the rami, in two pieces shewing both sides.	Do.			
53	Do.	A ditto, ditto.	Do.			
54	Elephas Hysudricus.	Fragment of a detached molar, lower jaw left side, broken in front and behind, shewing six ridges, the four anterior worn.	Do.	...	Col.Colvin ?	
55	Elephas insignis	Fragment of a detached molar, upper jaw left side, shewing part of five ridges more	Do.	...	Unknown.	

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
		or less worn, ten distinct mammillæ seen on the fourth ridge. Inferred to be the first true molar.				
S 56	Elephas insignis.	Portion of a molar tooth, much broken.	Sewalik Hills.	...	Unknown.	
57	Elephas Hysudricus.	Portion of a molar, upper jaw, shewing three worn ridges; the rest wanting.	Do.	...	Do.	
58	Do.	Fragment of third milk molar, shewing part of six ridges, crown well plaited and plates deep.	Do.	...	Do.	
59	Elephas insignis.	Rear portion of a detached molar, upper jaw.	Do.	...	Do.	
60	Elephas Hysudricus.	Detached fragment of 3rd milk molar, upper jaw, shewing remains of six ridges.	Do.	...	Do.	
61	Elephas ——— ?	Fragment of Elephant's molar, containing three plates.	Do. ?	...	Do.	
62	Do.	Ditto.	Do. ?	...	Do.	
63	Do.	Fragment of lower jaw with portion of molar attached.	Do. ?	...	Do.	

64	Elephas Hysudricus.	Fragment of molar shewing four ridges.	Sewalik Hills ?	...	Unknown.	These fragments were subsequently found to form part of one molar and to belong to cranium No. 28.
65	Do.	Fragment of molar shewing six ridges.	Do.		Do.	
64[2]	Elephas cliftii.	Fine fragment comprising horizontal ramus of lower jaw right side, from the middle of the symphysis on to near the middle of the ascending ramus, with one finely preserved molar. This tooth shews seven ridges in full wear with about two ridges broken off, disks a good deal depressed, and the enamel much plaited as in No. 30. An interrupted basal cingulum on the outside at the extremities of the valleys as in that specimen. The diastema slopes downwards and forwards at an acute angle with the inferior border of the ramus and is a little concave in its outline. Three mentory foramina in a nearly horizontal line, differing from what is seen in *E. planifrons*, the most anterior being the largest. Length of molar, ... 7,2 Greatest width, ... 3,8 Inferred to be the last true molar of an old animal, not so large as in No. 30.	Do.	J. A. S. Vol. V. p. 182. No. 5.	Col. Colvin.	Marked No. 5, in Bak. and Dur. Cat.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
$\frac{S}{65^2}$	Elephas insignis.	Fine fragment, nearly like the last, comprising the right horizontal ramus of the lower jaw, with the basal part of the ascending ramus; broken off near the symphysis and shewing two teeth; the anterior of which is reduced to half its length, and nearly worn out, shewing three very broad disks of wear. The posterior molar which is inferred to be the last has seven ridges emerged from the alveolus; the back part being concealed and in germ; the two anterior ridges only are affected by wear; the rest intact and enveloped with cement; they are seen to be high as is characteristic of the species. Length of fragment of anterior molar, 4,5 Width of crown behind, ... 3,4 Length of back molar, ... 11, Width of ditto at fourth ridge, ... 3,9 A part of the posterior tooth is seen in the posterior section. It is inferred to be the last true molar.	Sewalik Hills.	...	Col. Colvin	

66	Elephas insignis ?	Portion of jaw containing a fragment of a very old tooth of enormous size shewing only three ridges. Width of crown is 4,5 inches.	Sewalik Hills.	...	Col.Colvin ?	
67	Elephas (Stegodon.) ——— ? insignis ?	Fragment comprising posterior half of horizontal ramus, right side, and base of ascending ramus, with the rear portion of the last true molar in situ, shewing four ridges all of which had come into wear. The jaw is so small in all its dimensions and the crown of the tooth so narrow, that it is considered to have belonged to a dwarf variety. A large quantity of cement in the valleys of the last ridges. Width of crown of molar, ... 2,9	Sewalik Hills ?	...	Do. ?	No mark.
68	Elephas insignis.	Fragment comprising the greater part of horizontal ramus right side, including a part of the symphysis and the base of the coronoid apophysis, containing the greater part of a long molar, of which the two last ridges are nearly intact; the next three more or less worn and the four anterior broken off. The mammillæ are high and a good deal of cement in the posterior valleys. The salient parts of the teeth exhibit a polished appearance as if varnished, which is unusual in Sewalik specimens, but not uncommon	Sewalik Hills ? or Ava ?	...	Unknown.	Origin very doubtful.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/68		in Ava ones, and there is no mark to indicate its origin. From the size of the jaw the tooth is inferred to be the penultimate. Length of tooth, ... 10,2 Greatest width measured behind,.... 3,3				
69	Mastodon sivalensis	Mutilated fragment, containing part of crown of a molar tooth, of which the very complex pattern of the crown corresponds so far as determinable with *M. Sivalensis* but doubtful. Length of tooth, ... 5,4	Sewalik Hills ?	...	Unknown.	Matrix is of a mixed black and yellowish sandstone, differing from that of any of the other specimens. Can it be from Perim ?
70	Elephas (Loxodon) planifrons.	Fragment, comprising posterior end of a large molar shewing about seven ridges. No mark.	Do.	...	Col. Colvin ?	No mark.
71	Elephas Hysudricus.	Fragment of upper molar, shewing about nine plates: the five anterior more or less worn, the rest intact, the digitated terminations shewing annular disks of wear.	Do.	...	Do. ?	
72	Do.	Fragment of upper molar, consisting of ten plates, their outer surface denuded of cement.	Do.	...	Do. ?	

73	Elephas Hysudricus.	Fragment of upper molar, shewing eight or nine well worn plates which are more closely approximated than usual.	Sewalik Hills.	...	Col. Colvin ?	This specimen is very like that marked No. 32, in the Nerbudda series.
74	Do.	Fragment of smaller size having about six plates like No. 73 in wear.	Do.	...	Do. ?	
75	Do.	Fragment of young upper molar, shewing six deep narrow plates. Probably antepenultimate true molar ?	Do.	...	Do. ?	Like No. 32, on wear of crown.
76	Mastodon or Elephas.	Fragment of horizontal ramus, lower jaw, left side, containing a molar tooth in situ but the crown so completely broken off down to the ivory body that no determinable character remains to decide whether of mastodon or elephant.	Do.	...	Do. ?	
77	Elephas Stegodon Sp.—— ? insignis ?	Fragment comprising the back portion of the horizontal ramus, with the greater part of the ascending ramus, lower jaw, right side, but presenting only two mammillæ of a ridge, the rest either broken off or concealed behind; there is enough to shew that it is a stegodon, probably *E. insignis ?*	Do.	...	Do.	No mark.
78	Elephas Stegodon ——— ?	Fragment of small-sized molar, comprising the two anterior ridges well worn. Strongly marked disk of pressure on the enamel in front. Probably belonged to *first true molar.*	Do.	...	?	No mark.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/79	Tusks of Elephant and Mastodon.	Fragment of an enormously large ivory tusk shewing an *oval section.* Length about ..... 14,5 inches. Long diameter, ... 7,7 „ Short ditto, ... 6,4 „ Girth, ... 22,7 „	Sewalik Hills.	J. A. S. Vol. V. p. 182.?	Probably Col. Colvin.	Below an ink mark No. 127, while the tusk fragments in Bak. and Durand's Catalogue of Col. Colvin's specimens, range from Nos. 60 and 80.
80	...	Large tusk fragment nearly circular in section: girth about 18 inches; long 16 inches.	Do.	Do.	Do.	Marked No. 61, B. and D.'s Catalogue.
81	...	Ditto ditto of very large size but compressed and shewing by the core of the nucleus that it was near the growing base. Large diameter, ... 8,2 inches	Do.	Do.	Do.	Marked No. 62, B. and D.'s Cat.
82	...	Tusk fragment, in size, form, section, and appearance like No. 81.	Do.	Do.	Do.	Marked No. 63, B. and D.'s Cat.
83	...	Ditto fragment of large size.	Do.	Do.	Do.	Marked No. 64, do.
84	...	Ditto ditto oval and compressed and slightly curved.	Do.	Do.	Do.	Marked No. 65, do.
85	...	Ditto ditto cylindrical in section.	Do.	Do.	Do.	Marked No. 66, do.

86	...	Ditto cylindrical fragment of moderate size remarkable as shewing a *shift* in the rock while embedded, there being a *fault* in the specimen presenting a great number of thin vertical comminuted laminæ!	Sewalik Hills.	J. A. S. Vol. V. p. 82.	Col. Colvin.	Marked61,B. & D.'s Cat.
87	...	Small-sized cylindrical fragment only 2,7 inches diameter.	Do.	Do.	Do.	Marked 61, ditto.
88	...	Fragment comprising about 9,5 inches in length of the tip of a slender tusk curved and cylindrical, 2,8 inches diameter.	Do.	Do.	Do.	Marked 62, ditto.
89 to 95	...	Seven fragments of ivory tusk of different sizes and section, cylindrical or compressed.	Do.	Do.	Do.	Marked 60, ditto.
96 & 97	...	Two fragments exactly alike and probably of the same tusk, nearly cylindrical and longitudinally twisted in the grain. Diameter about 4,5 inches.	Do.	Do.	Do.	No mark.
98	...	Tusk fragment of large diameter slightly compressed; brittle and much broken, mounted on a board. Largest diameter of specimen 6,8 inches.	Do.	...	Do.	No number.
99	...	Fragment of ditto much compressed and shewing a hollow core; the greater part of the outer lamina broken off. Greatest diameter, ... 8,5 inches. Smaller ditto, ... 4,5 „ The specimen is grooved on one side and was evidently an embedded portion.	Do. near Nahun	J. A. S. Vol. VI. p. 899. No. 3 ?	Conductor W. Dawe.	

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S						
100	...	Fragment of Tusk.				
101	...	Ditto ..... are these from Ava ?				
102	——— ?	Tusk of ——— ? in two pieces which unite, about 11½ inches long, nearly cylindrical. Largest diameter 24 inches, a little curved and deeply grooved longitudinally, more especially on one side. Black, hollow near base, opposite end solid, differing in texture and appearance from every other tusk in the collection, no indication of engine-turning upon the weathered fracture. Requires further examination. Is it tusk of *mastodon ?*	Sewalik Hills ?	...	...	History unknown. The grooving and general appearance as in *Hippopotamus amphibius*, but open to doubt from its large size.
102²	Elephas ——— ?	Tusk fragment nearly cylindrical in section, resembling Nos. 96 and 97, but larger.				
103	Elephas Hysudricus.	Fragment of anterior portion of ramus of lower jaw, right side, very much water-worn, shewing portion of a contused molar too mutilated for determination.				
104	Elephas ——— ?	Lower end of femur left side, shewing the condyles nearly touching as in *Elephas namadicus*, while in the existing living Elephant they are well apart.				

105		Ditto, ditto.				
106		Ditto, ditto.				
107		Ditto right side.				
108		Lower end of femur, one of the condyles broken.				
109		Detached condyle lower end of femur.				
110		Ditto, ditto.				
111		Upper extremity of femur, condyle broken off, portion of trochanter remaining.				
112		Ditto, ditto, trochanter and condyle gone.				
113		Sacrum nearly entire in hard sandstone matrix, very much water-worn, of very large size.				
114		Part of left Ilium with acetabulum.				
115		Mutilated fragment of cylindrical bone conjectured to be inferior extremity of left femur.				
116		Lower end left tibia of very large size, astragaline articulation perfect.	Sewalik Hills ? or Ava ?			
117		Upper end of tibia of very large size.				
118		Lower end of ulna left side, of enormous size.				
		Antero-posterior diameter at juncture of shaft with epiphysis,..... 8,6				
		Transverse ditto taken obliquely, .. 9,8				
		Extreme width of articular surface taken diagonally, ... 7,5				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 118		Antero-posterior diameter of larger articulating surface, ... 3,7 Transverse ditto, ... 5, This must have belonged to an animal of very large size.				
119	...	Left astragalus of medium size.				
120	...	Lower end of tibia.				
121	...	Dorsal vertibra shewing the body and costal articular pits, of moderate size.	...	...	...	Marked 4.
122	...	Upper end of ulna left side with olecranon.				
123	...	Portion of lower end of humerus with part of articular surface, otherwise mutilated.				
124	...	Lower end of femur left side with condyles closely approximated, moderate size.				
125	...	Fragment of large scapula, shewing glenoid cavity, broken off below the neck.				
126	Elephas ——— ?	Lower end right femur, with condyles quite perfect and closely approximated with but a slight fissure between. The largest in size of the Sewalik collection. Transverse diameter of condyles, ... 11,8 Antero-posterior diameter of ditto, .. 8,8	Sewalik Hills Nahun.	J. A. S. Vol. VI. p. 89.	Conductor Dawe.	Marked 2: but in Dawe's Cat. No. 2, is stated to be fragment of humerus.

127	Elephas ——— ?	Lower end of left femur, with condyles nearly touching.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	Marked 84.
128	Do.	Right femur, lower end, with condyles nearly touching, small size.	Do.	Do.	Do.	Marked 85.
129	Do.	Left femur, lower end, with condyles nearly touching.	Do.	Do.	Do.	Marked 82.
130	Do.	Left femur, lower end, condyles nearly touching, small size.	Do.	Do.	Do.	
131	Do.	Right femur, upper part, with head and trochanter; a longitudinal fracture had passed through the upper part of the bone in the rock, causing a fault. *Dimensions.* From outer border of head to outer border of trochanter, ... 1—6, Greatest diameter of head, ... 6,8	Do.	Do.	Do.	Marked 81, of B. & D.'s Cat.
132	Do.	Lower end of femur, right side, with right condyle broken off.	Do.	Do.	Do.	Marked 87, B. and D.'s Cat.
133	Do.	Portion of Pelvis left side, comprising greater part of Ilium and acetabulum, with a portion of the ischium. Antero-posterior diameter of acetab. 7,2	Do.	Do.	Do.	Marked 140, B. & D.'s Cat.
134	Do.	Right Ilium and acetabulum.	Do.	Do.	Col. Colvin ?	
135	Do.	Lower end of femur left side, small size.	Do.	Do.	Col. Colvin.	Marked 86, B. & D.'s Cat.
136	Do.	Lower end of tibia, left side.	Do.	Do.	Do. ?	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 137	Elephas ——— ?	Fine specimen of an entire left tibia in three pieces, a portion of fibula attached below.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col.Colvin ?	
138	Do.	Lower end of tibia right side.	Do.	...	Do.	
139	Do.	Lower end of tibia right side.	Do.	...	Unknown.	
140	Do.	This was found to consist of two pieces of tibia completing No. 137.	Do.	...		
141	Do.	Left calcaneum, very perfect, with all the articular surfaces, of large size, short and massive.	Do.	...	Col. Colvin.	No. 102, of B. and D.'s Cat.
142	Do.	Right ditto of smaller size.	Do.	Do.	Do.	No. 103, of ditto.
143	Do.	Ditto ditto more slender proportion.	Do.	Do.	Do.	No. 104, of ditto.
144	Do.	Humerus, upper end, left.	Do.	Do.	Do.	No. 91, of ditto.
145	Do.	Ditto ditto ditto.	Do.	Do.	Do.	No. 90, of ditto.
146	Do.	Ditto ditto right.	Do.	Do.	Do.	No. 89, of ditto.
147	Do.	Ditto lower end left.	Do.	J. A. S. Vol. VI. p. 899.	Conr. Dawe.	Marked No. 14.
148	Do.	Ditto ditto left.	Do.	...	Unknown.	Erroneously marked "W. Dawe No. 41."
149	Do.	Lower end of radius and ulna right side together with the greater part of the carpal bones attached and held together by sandstone matrix, being the only in-	Do.	Do.	...	Bears no mark but is evidently 41 of Dawe's Cat.

		stance of the kind among the Elephants in the whole collection.				
150	Elephas ——— ?	Upper end of ulna with olecranon right side.	Sewalik Hills.	...	Unknown.	
151	Do.	Ditto ditto left side, olecranon broken off.	Do.	J. A. S. Vol. V. p. 182.		
152	Do.	Upper end of tibia.	Do.	...	Unknown.	
153	Do.	Half of lower end of humerus.	Do.	Do.	Col. Colvin.	No. 95, of B. and D.'s Cat.
154	Do.	Ditto ditto.	Do.	Do.	Do.	No. 92, of ditto.
155	Do.	Top of humerus.	Do.	Do.	Do.	No. 88, of ditto.
156	Do.	Axis.	Do.	Do.	Do.	No. 105, of ditto.
157	Do.	Upper maxilla, right side fragment.	Do.	Do.	Do.	No. 2, of ditto.
158	Do.	Rib in six pieces.	Do.	...	Unknown.	
159	Do.	Scaphoid of right hind foot.	Do.	...	Do.	Little mineralized and adheres strongly to tongue. Is it Nerbudda?
160	Do.	Fragment of scapula broken off a little beyond the neck, glenoid cavity of enormous size.	Do.	...	Purchased.	
161	Do.	Upper end of humerus partly mutilated, of enormous size.	Do.	...	Do.	
162	Do.	Upper end of left humerus of very large size.	Do.	...	Do.	
163	Do.	Ditto right humerus, in two pieces, fine specimen.	Do.	...	Do.	
164	Do.	Lower end of left humerus.	Do.	...	Do.	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 165	Elephas ?	Upper end of femur, trochanter broken off.	Sewalik Hills.	...	Purchased	
166	Do.	Ditto ditto.	Do.	...	Do.	
167	Do.	Ditto of tibia.	Do.	...	Do.	
168	Do.	Ditto ditto right side.	Do.	...	Unknown.	
169	Do.	Lower end of tibia right side.	Do.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 229, of B. & D.'s Cat.
170	Do.	Portion of pelvis with acetabulum entire.	Do.	Do.	Do.	No. 252, of ditto.
171	Do.	Articulating head of femur detached.	Do.	Do.	Do.	No. 221, of ditto.
172	Do.	Ditto ditto ditto, of small size.	Do.	Do.	Do ?	
173	Do.	Portion of left osinnominatum, comprising part of Ilium, ischium and acetabulum.	Do.	Do.	Unknown.	
174	Do.	Astragalus.	Do.	Do.	Col. Colvin.	No. 233, of ditto.
175	Do.	Scapula left side in two pieces comprising the whole length of the spine with a portion of the body above and below, also the glenoid cavity and neck.	Do.	Do,	Do.	No. 250, of ditto.
176	Do.	Upper part of shaft of femur, head and trochanter broken off, interior filled with sandstone matrix.	Do.	Do.	Unknown.	No mark.
177	Do.	Head of scapula with glenoid cavity, body broken off, of large size.	Do.	Do.	Col. Colvin.	No. 252, of B. & D.'s Cat.

178	Elephas ——— ?	The same of less size.	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 251, of B. and D.'s Cat.
179	Do.	Ditto ditto.	Do.	...	Unknown.	No mark.
180	Do.	Upper part of olecranon right side with inferior portion of articular surface.	Do.	...	Do.	No. 228, of B. & D.'s Cat.
181 to 191	Do.	Various vertebræ.	Do.	Do.	Col. Colvin.	Comprising the following Nos. of B. & D.'s Cat. 192, 198, 193, 202, 196, 212, 187, 199, 191, 211, and one No. undeterminable.
192	Do.	Dorsal vertebra of large size.	Do.	Do.	Do.	No. 188, of B.&D.'s Cat.
193	Hippopotamus (Hexaprotodon) Sivalensis	A nearly entire cranium in three pieces, shewing the occiput and occipital crest, the sagittal do., and the whole of the chevron region on to the border of the incisives; both zygomatic arches broken off and the rim of both orbits damaged; these parts shew marks of recent fracture and were probably perfect when presented. The true molars of both sides broken off; the four premolars on the left side are present and the three posterior premolars on the right side nearly entire and with the crowns much worn, shewing the animal to have been old. A section of the right canine is	Do.	...	Col. Colvin ?	No mark or No.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 193		also seen in situ. This is on the whole a very perfect specimen, nearly as much so as fig. 1, pl. 59, of Faun. Antiq. Siv. This subdivision of the genus is distinguished by the length of the sagittal crest, the slight projection of the orbits above the plain of the frontal; all which characters are well shown when the skull is compared with *Hipp. palæindicus.* Nerbudda Cat. No. 17. The specimen is partly covered with hard sandstone matrix. No mark, but inferred to be Sewalik, and probably from Col. Colvin.				
194	Hippopotamus (Hexaprotodon) Sivalensis	Cranium broken across near the constriction in front of the orbits, but very perfect behind, shewing the zygomatic arches, temporal fossæ, occiput and condyles; the orbits a little broken in their rim; molar teeth protruded but broken off. This must have belonged to an animal of large size, as the distance between the outer surface of the zygomatic arches is 13,7 inches. No mark or number, but imbedded	Sewalik Hills ?	...	Unknown.	

		in hard sandstone and inferred to belong to the species from the length of the sagittal suture and the little prominence of the orbits above the plain of the frontal. Inferred to be Sewalik.				
195	Do.	Nearly like the last, but occipital crest and right zygomatic arch broken off; no mark or number. Imbedded in sandstone.	Do.	...	Unknown.	
196	Do.	Also like the two last, occipital portion more perfect with edge of crest preserved; the sagittal crest and both zygomatic arches broken off: right orbit a little mutilated behind, but shewing a large lachrymal tuberosity: left orbit nearly entire behind, shewing the whole of the rim. Four molars on the right side in the last stage of detrition, shewing the animal to have been extremely old. Covered with sandstone matrix.	Do.	...	...	No mark or No.
197	Do.	Another like the three last, mutilated in front of orbits, but shewing the tympanic Fossæ; the last true molar on either side is not much emerged above the alveolus, and the sutures are open shewing the animal to have been young. This specimen is more mutilated about the orbits than the three preceding, and the temporal	Do.	...	...	No mark or No.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 197		fossæ are filled with hard sandstone matrix.				
198	Hippopotamus (Hexaprotodon) Sivalensis	Another Cranium, nearly like 194, with the 2 zygomatic arches and orbits; the last true molar on each side emerged but unworn. All the cavities filled with hard sandstone matrix. A young adult.	Sewalik Hills ?	...	...	No mark or No.
199	Do.	Cranium mutilated at the muzzle in front of the 2nd premolar, and with the parietals and occiput obliquely broken off towards the left side, so as to expose the cerebral cavity; right zygomatic arch and glenoid surface entire; orbits a little damaged in the rim; nasal bones stove in by pressure; the teeth on either side are all present except the anterior premolar; the last true molar is in a state of germ; the penultimate shews well the basal cingulum of enamel. The animal was a young adult. The cavities and fossæ are filled up with a hard gritty sandstone. This specimen shews the characters of the	Do.	...	...	No mark.

		upper molars better than any of the five preceding specimens.				
200	Do.	Mutilated cranium, broken off behind about the middle of the temporal fossæ and in front through the first true molar, zygomatic arch present on the right side with the greater portion of both orbits; the 3 last molars on the left side present and the 2 last on the left; the former well worn shewing the animal to have been old; hard sandstone filling the cavities and fossæ.	Sewalik Hills ?	...	...	No mark.
201	Do.	Fine fragment of the muzzle broken off a little behind the fossæ of the canine alveoli, shewing on the right side 3 premolars well worn, the whole tuberosity of the canine alveolus on the left side together with the empty alveoli of 3 incisors are present; both broken off on the right side. Belonged to an old animal—an instructive specimen as shewing the characters of the canines and incisors of the upper jaw. Hard sandstone matrix.	Sewalik Hills ?	...	...	No mark. Nos. 201 and 202 unite and belong to one Cranium.
202	Do.	Mutilated fragment of cranium, broken off from behind the right orbit, obliquely forwards to in front of left orbit and anteriorly about the middle of the	Do.	...	...	No mark.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 202		muzzle constriction, shewing on the right side the crowns of the back molars well worn and in tolerable preservation. Belonged to an old animal. Hard sandstone matrix.				
203	Hippopotamus (Hexaprotodon) Sivalensis	Fragment of cranium comprising the upper maxilla of both sides, broken off on a level with the floor of the nasal fossa, shewing on either side the 6 back molars very much worn, proving the animal to have been very old.	Origin. Unknown. Ava?	...	...	No mark.
204	Do.	Fragment of upper maxilla left side shewing the 2 last premolars and 3 true molars in situ; the last molar is a little worn shewing the characteristic trefoil disks of wear. Half of palate also shewn. Some ferruginous coloured matrix on the palate like the Ava specimens.	Sewalik Hills?	...	...	No mark.
205	Do.	Superior maxillary right side containing the five posterior teeth in situ, of a very old animal! Specimen much mutilated.	Do.	...	Unknown.	No mark.
206	Do.	Fine specimen of the cranium, broken off in front about the middle of the facial portion, shewing the occiput nearly	Do.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. III of B. and D.'s Cat. This specimen should be handled with care,

		entire as also the prominent edge of the occipital and sagittal crests; the two zygomatic arches and temporal fossæ, together with both orbits, the right nearly entire: the teeth all broken off, and the spheno-palatine region with occipital condyles wholly abraded by attrition. Hard sandstone matrix in the temporal fossæ and orbits, the most perfect specimen in the collection so far as regards the strictly cranial characters of the head.				as it consists of many fragments.
207	Do.	Fine specimen comprising the greater part of the lower jaw, both sides, in two pieces. The left ramus, containing all the molars except the anterior premolar which had dropt out; the right containing the anterior premolar and the next five teeth, the last true molar alone being wanting. The chin portion is perfect to the border of the incisive alveoli. The two canines are present broken off only at their tips and presenting the disks of wear on their posterior surface. The six incisors are also present, perfect nearly to their tips; they emerge nearly horizontally, the outer being a little lower, and they are subequal in size. The left ramus shews the last three true	Sewalik Hills. near. Nahun.	J. A. S. Vol. VI. p. 899.	Conductor Dawe.	No. 24, of D.'s Cat. This specimen was very perfect and valuable, but it has been hardly dealt with in the As. Museum, most of the teeth having been broken off, and the fragments searched for every where.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 207		molars of which the anterior is much worn, the penultimate less so and the last barely touched; the premolars are all broken off except one. On the right side the base of the anterior premolar is in situ with but a very short interval between it and the canine, not much exceeding that between it and the second premolar; the body of this tooth is broken off, as are also the second and third premolars. The fourth is present and barely touched at its apex, shewing that the animal was adult but not old. This specimen is probably the most perfect that has been found in the Sewalik Hills, being deficient only in the ascending ramus and the expanding disk at its base. The difference in the length of the diastema between it and *H. amphibius* is very remarkable. Probably a female.				

208	Do.	Exserted portion of the upper canine right side, shewing the disk of wear complete nearly to the tip.	Sewalik Hills.	...	...	Probably broken off from some cranium in the collection.
209	Do.	Inferior maxilla with the symphysial portion perfect on both sides on the border of the incisive alveoli, shewing part of the canines in situ and the outer incisor on either side, the four intermediate ones having dropped out; the left horizontal ramus exhibiting the broken off bodies of seven molars, the right side being shorter and shewing only the four premolars, also broken off. The alveoli of the four middle incisors are much larger in diameter than in specimen No. 207, indicating probably that the animal was a male.	Do.	...	Unknown.	No mark. The chin portion of the symphysis below covered over with sandstone matrix.
210	Do.	Mutilated fragment of lower jaw, comprising only the symphysial part and a short portion of the right ramus; the canine alveoli on either side broken off; the two middle incisors very large, being 1,25 inches in diameter. The alveoli of the next two incisors shew them to have been not more than half the diameter: the outermost on each side nearly as large as the middle ones; probably an old large sized male. The premolars very much worn.	Do. ?	...	Do.	This specimen is much weathered, and greyish white in colour although thoroughly mineralised and heavy. It differs very considerably in the large size of the middle incisors from any other specimen in the collection: but there is no mark or label

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/210						to indicate whether it is from Ava or the Sewalik Hills. Can it be No. 124, of B. and D.'s Cat.?
211	Hippopotamus (Hexaprotodon) Sivalensis	Fragment comprising left half of lower jaw, broken off about middle of symphysis shewing base of canine in situ, and also another detached canine fixed upon the specimen by matrix.	Sewalik Hills ?	...	Unknown.	No mark or record.
212	Do.	Lower jaw right side, comprising the posterior half of horizontal ramus, containing the last three molars, also the ascending ramus with the coronoid process and condyle, nearly entire; the leafy expansion below broken off; the last true molar shews a well developed talon behind attached to sandstone matrix.	Do.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 120, of B. and D.'s Cat.
213	Do.	Mutilated fragment of the right ramus.	Do.	Do.	Do.	No. 121, of do.
214	Do.	Fragment comprising the lower jaw both sides at the symphysis, shewing the canines and six incisors; otherways	?	...	...	No mark or No. Can this be the Ava Specimen from Col.

		much mutilated; belonged to a young or half grown animal with milk dentition?				Burney, J. A. S. Vol. VI. p. 1099.
215	Do.	Fragment of lower jaw left side.	Do.	...	Unknown.	No mark.
216	Do.	Ditto ditto right side containing the last premolar and first true molar.	Do.	...	Do.	Ditto, symphysis portion subsequently found to match.
217	Do.	Fragment of right ramus lower jaw, with part of ascending ramus containing four molars the last still in the alveolus; belonging to an adolescent animal.	Do.			
218	Do.	Fragment of lower jaw left side, containing the last three molars.	Do. ? Ava ?	...	Unknown.	No mark.
219	Do.	Fragment of upper maxilla containing the posterior part of last molar in germ.	Sewalik Hills.	J. A. S. v. V. p. 182.	Col. Colvin.	No. 115, of B. and D.'s Cat.
220	Do.	Condyle of lower jaw left side with portion of ascending ramus.	Do.	Do.	Do.	No. 126, of do.
221	Do.	Detached fragment of molar.	Do.	Do.	Do.	No. 119, of do.
222	Do.	Ditto.	Do.	Do.	Do.	No. 129, of do.
223 to 226	Do.	Detached fragments of inferior canines.	Do.	Do.	Do.	Nos. 130, 133, 136 and 134, of do.
227 to 229	Do.	Detached fragments of upper canines.	Do.	Do.	Do.	Nos. 135, 131 and 132, of do.
230	Do.	Detached fragment, upper maxilla, right side, containing the alveoli of a canine	Do. ? or Ava ?	Do.	Do.	No mark.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 230		and three incisors, and the three anterior premolars broken off: the greater part of the canine is seen in the alveolus.				
231	Hippopotamus (Hexaprotodon) Sivalensis	Axis with odontoid process, broken off.	Sewalik Hills	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 155, of B. and D.'s Cat.
232	Do.	Right femur, upper portion, comprising head and trochanters.	Do.	Do.	...	No mark.
233	Do.	Detached molar.	Do.	...	Do.	No. 129, of B. and D.'s Cat.
234	Do.	Detached premolar.	Do.	Do.	Do.	No mark determinable.
235	Do.	Lower jaw, right side, posterior half with portion of ascending ramus and leafy expansion, also the last three molars.	Do. ? or Ava ?	...	Do.	Very black and heavy and infiltrated with iron. Doubtful if from Sewalik or Ava.
235²	Do.	Portion of left horizontal ramus of lower jaw, containing five molars, all except the last well worn; section of tusk shewn in front.	Sewalik Hills.	...	Do.	No. 56, of B. and D.'s Cat.
236	Do.	Body of axis, neural arch and odontoid broken off, like No. 231.	Do. ?	...	Unknown.	

237	Do.	Lower end of united radius and ulna, right side.	Sewalik Hills ?	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 332, of B. and D.'s Cat.
238	Do.	Lower end of radius left side, ulna broken off.	Do.	...	...	No mark or record.
239	Do.	Lower end of radius and ulna, right side, considerably smaller than No. 237.	Do.	...	...	No number.
240	Do.	*Transferred to Ava Specimens.*				
241	Do.	Upper end of femur, left side, top of trochanter broken off.	Do.	...	...	No mark.
242	Do.	Lower end of ulna detached.	Sewalik ? or Ava ?	...	...	No mark.
243	Do.	Patella very entire.	... ?			
244	Do.	Astragalus.	Sewalik.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 564, of B. and D.'s Cat.
245	Do.	Patella partly broken off.	Do.	...	Do.	No. lost.
246	Merycopotamus dissimilis.	Lower jaw, right side, comprising the horizontal ramus and part of the ascending ramus, the expanded disk below lost by a recent fracture, containing the last three molars in situ and little worn, the three premolars dropped out, but their alveoli shewn. The canine also in situ. The two last teeth exhibit well the rugous surface of the enamel with the basal cingulum and the ruminant-like pattern of wear on the crown, which are character-	Do.	J. A. S. Vol. VI. p. 899. And Vol. V. p. 293, Note. Faun. Antq. Sival. pl. 67, fig. 6, in outline.	Cond. Dawe.	Marked No. 34, of his Cat. The entire specimen as presented to the A. S. museum, is figured in the Faun. Antiq. Siv. pl. 67, fig. 6. The most characteristic part of it has been subsequently lost.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
		istic of the genus, which is nearly allied to *Anthracotherum* in the teeth.				
S/247	Hippopotidœ. Merycopotamus dissimilis.	Fragment comprising the posterior part of the ramus, left side, containing the three last molars in situ, but very much concealed by matrix; of a larger size than No. 246.	Sewalik ?	...	...	No mark.
248	Elephas ——— ?	Axis nearly entire of very large size, shewing the odontoid process and the two articular surfaces for the atlas, together with the whole of the neural arch.	Do.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 105, of B. and D.'s Cat. Bears also the following Nos. 395, and 138.
249	E.—— ?	Remarkable specimen, comprising the six inferior cervical vertebræ in connexion as in the skeleton, the axis shewing the odontoid process nearly entire; these bones are held together by a sandstone matrix, which admits of every part of the bones being seen, except the contiguous surface of the bodies. The bones well mineralized. This is the only specimen of the kind in the collection.	Do.	...	Do.	Approaches nearer the Indian than the African Elephant, but has the spinal foramen wide in proportion to its length and the articulating surfaces for Atlas also wider, although less so in proportion than in the African Elephant.

250	E.—— ?	Detached body of cervical vertebræ, apophyses broken off.	Sewalik ?			
251	E.—— ?	Detached body of dorsal vertebræ, apophyses broken off.	Do. ?			
252	E.—— ?	Detached axis shewing odontoid process, neural arch broken off.	Do. ?			
253	E.—— ?	Left patella of large size.	Do. ?	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 526, of B. and D.'s Cat.
254	E.—— ?	Lower end of tibia, right side.	Do.			
255	E.—— ?	Lower end of radius, left side.	Do.			
256	E.—— ?	Detached vertebra.	Do.			
257	E.—— ?	Compressed portion of tusk, shewing oval section, much grooved longitudinally.	Do.			
258	E.—— ?	Fragment comprising the extremity of incisive sheath of a large animal, left side.	Do.			
259	E.—— ?	Fragment of ivory tusk.	Do.			
260	E.—— ?	Dorsal vertebra of small size, spinous foramen broken off.	Do.	...	Do. ?	
261	E.—— ?	Ditto shewing only body.	Do.			
262	E.—— ?	Body of vertebra, apophyses broken off.	Do.			
263	E.—— ?	Lower end of tibia of a young animal, epiphyses not united.	Do.			
264	E.—— ?	Top of radius, left side with articulating surface.				
265	E.—— ?	Right semilunar bone of carpus.	Do.	...	Unknown.	
266	E.—— ?	Another ditto thicker in proportion.	Do.			
267	E.—— ?	Left unciform of carpus.	Do.			
268	E.—— ?	Tip of ivory tusk, small fragment.	Do.	...	Col. Colvin.	No. not determinable.

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/269	Rhinoceros. R. Sivalensis ?	Fragments comprising the greater part of the cranium broken off behind about the posterior parts of the zygomatic arch, the fracture having removed the whole of the occiput and the left zygomatic arch. The specimen had also suffered from a crush acting from above downwards from right to left; the greater part of the parietal and the whole of the frontal, and also the united nasals are present; the right orbit broken off; the left nearly entire. The right maxillary shews the remains more or less of seven molars, the last broken off, the penultimate well worn; the anterior teeth have all their crowns broken off nearly on a level with the alveoli; on the left side, the crowns are all broken off; the palate seems narrow, but this may be probably owing to the crush; the tip of the nasal shews the rugous gibbosity of the base of a *very large* horn. The species was evidently unicorned.	Sewalik Hills. near Nahun.	J. A. S. Vol. VI. p. 899.	Wm. Dawe.	No. 25, of Dawe's Cat.

270	Rhinoceros. ——— ?	Lower jaw, left side shewing greater part of horizontal ramus, but broken off in front and behind, with the remains of four molars, the crowns all broken off.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 152, of B. & D.'s Cat. Too mutilated for identification.
271	Do.	Lower jaw, right side, broken off in front at commencement of symphysis and behind at the coronoid, with remains of five molars, much mutilated. In condition like No. 270.	Do.	Do.	Do.	No. 153, of do.
272	Do.	Fine fragment comprising the lower end of tibia and fibula, right side, attached to each other and to the bones of the tarsus in their natural position, together with the greater part of the length of three metatarsals also united, and attached to the carpus: the inferior apophysis of the calcaneum is broken off, the tibia bent nearly at right angles with tarsus and metatarsus. All the bones are held together by argillaceous matrix in their natural relative position in a manner which is remarkable for the fossil state among Sewalik remains.	Do. Moginund.	Do. Figure 19 of pl. 17.	Do.	No number. Found in the clay marl of Moginund. "Soft" fossil.
273	Do.	Upper extremity of humerus shewing the head upper trochanters, the descending spine of the large tuberosity broken off: of large size.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Do.	No. 163, of B. and D.'s Cat.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/274	Rhinoceros. ——— ?	Upper extremity of humerus, right side, shewing the head and both tuberosities as also the middle apophysis of the anter.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 150, of B. & D.'s Cat.
275	Do.	Ditto ditto, left side.	Do.	Do.	Do.	No. 151, of do.
276	Do.	Shaft of humerus, articulating epiphysis and tuberosities broken off.	Do.	Do.	Do.	No. 160, of do.
277	Do.	Right femur, articulating head with part of shaft attached; leafy expansion of third trochanter broken off.	Do.	Do.	Do.	No. lost.
278	Do.	Shaft of femur, left side, articular epiphysis and trochanters broken off, base of leafy expansion remaining.	Do.	Do.	Do.	No. 167, of B. and D.'s Cat.
279	Do.	Mutilated fragment of shaft of femur, right side, articular epiphysis broken off.	Do.	Do.	Do.	No. 168, of do.
280	Do.	Lower end of femur, left side, shewing the condyles and trochlear pulley with a short portion of the shaft attached.	Do.	Do.	Do.	No. 169, of do.
281	Do.	Lower end of femur, right side, with the inner surface of the inner condyle partly broken off.	Do.	Do.	Do.	No. 141, of do.
282	Do.	Mutilated humerus, the articular epiphysis below broken off; part of the head re-	Do.	Do.	Do.	No. 162, of do.

		maining, the tubercles being broken off. Belonged to a young animal.				
283	Do.	Top of ulna, left side, shewing articular pulley and part of olecranon.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Unknown.	No. 170, of B. & D.'s Cat.
284	Do.	Ditto right side in like condition.	Do.	Do.	Do.	No. 165, of do.
285	Do.	Upper half of right tibia with articular surface nearly entire.	Do.	Do.	Do.	No. 171, of do.
286	Do.	Lower end of humerus, left side, broken off at commencement of shaft.	Do.	Do.	Do.	No. 164, of do.
287	Do.	Astragalus, very perfect, of right side.	Do.	Do.	Do.	No. 181, of do.
288	Do.	Calcaneum, left side, nearly entire.	Do.	Do.	Do.	No. 180, of do.
289	Do.	Middle metacarpal of right fore leg entire.	Do.	Do.	Do.	No. 176, of do.
290	Do.	Distal extremity of metacarpal or metatarsal of large size.	Do.	Do.	Do.	No. 177, of do.
291	Do.	Fragment of middle metatarsal, right side, distal extremity broken off, large size.	Do.	Do.	Do.	No. 179, of do.
292	Hippopotamus (Hexn.) Sivalensis	Lower end of tibia, left side, shewing the articular surface and part of shaft.	Do.	Do.	Do.	No. 224, of do.
293	Do.	Portion of right scapula, comprising the glenoid cavity base of the acromion and a part of the spine; blade broken off, the coracoid tubercle very large and salient.	Do.	...	Unknown.	Determination of the genus not quite certain, there being no recent bone for comparison.
294	Do. ?	Part of right os innominatum comprising portion of the blade of the Ilium, and of the ischium, with the acetabulum.	Do.	...	Unknown. Col. Colvin.	No mark or number. Determination approximate.

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S 295	Hippopotomus (Hexaprotodon) Sivalensis.	Lower end of femur, left side, shewing only the condyles and rotular pulley. No part of the shaft.	Sewalik Hills ?	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 143, of B. and D.'s Cat., but bearing an original ticket, No. 431.
296	Do. ?	Upper extremity of the tibia right side, shewing the articular surfaces for the outer and inner condyles and the attachments of the conical ligaments.	Do.	Do.	Do.	No. 99, of B. and D.'s Cat. Determination not quite certain.
298	...	Fragment comprising the symphisial portion of the lower jaw, with a part of the horizontal ramus right side, shewing the second premolar in situ: the broken extremities of six incisors and the two canines. Origin of this specimen doubtful.	Do. ?	...	Unknown.	No mark or number. The specimen has a black surface & white fracture.
299	Do.	Fragment of right inferior canine, shewing the worn surface to near the tip.	Do.	...	Do.	No mark or number. May belong to some of the jaw specimens ?
300	Do.	Fragment of upper canine, shewing the included alveolar portion, with deep reniform outline in section.	Do. Nahun.	J. A. S. Vol. VI. p. 899.	Conductor Dawe.	No. 29, of Dawe's list.
301	Do.	Fragment of inferior canine, right side partly covered with matrix.	Do.	Do.	Do.	No. 30, of do.

302	Rhinoceros.	Entire humerus, left side found imbedded in argillaceous matrix, which has been partly removed, laying bare the articular surfaces of both extremities together with the tuberosities, and a great part of the shaft on one side; the lower jaw of a Horse, both rami, together with the lower end of the left femur of the same animal united to it on the other side by matrix. The humerus is of large size, and equal to Nos. 273, 274. *Dimensions.* Length from tuberosity to external condyle, ... 19,4 To internal ditto, ... 18,8 Width of condyles, ... 4,4 There is great obliquity in the plane of the distal end of the lower articulation, the outer condyle projecting very much beyond the inner as in Baker and Durand's fig. Vol. V. pl. XVII. figs. 6 and 7.	Moginund bed Sewalik Hills.	J. A. S. Vol. V. p. 183.	...	No. 260, of B. and D.'s Cat. A notable specimen as indicative of the manner in which the bones of different animals were washed together into the mud beds of the Sewalik strata: the Moginund bone bed being a stratum of argillaceous earth: the bones soft and white and adhering to the tongue. The mud matrix penetrates into the cores of the hollow bones.
303	Equus Sivalensis	Fine specimen, connected by matrix to No. 302, comprising both horizontal rami of the lower jaw from behind the molars on to the middle of the symphysis, in two pieces: the rami united by their inferior border to the shaft of				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 303		the rhinoceros humerus, leaving their sides and the lines of molars free and in relief. The whole series of six molars is present on either side, adult and well worn but not aged, those on the right side having little matrix on the crowns of the first four: the two backmost, more or less covered, as also the greater part of the crowns on the left side. The left ramus is depressed somewhat, by a crush, below the level of the right. The teeth resemble in size and pattern of crown those figured in the Faun. Antiq. Sival. pl. 82, fig. 2. The front fragment passes nearly through the middle of the symphysis, shewing in section the included portions of two canines, one on each side. The jaw is nearly of the size of that of an English Horse cranium in the Asiatic Society's Museum, the principal difference being that the height of the diastemal portion is greater in the fossil.				

		The following are the principal Dimensions. Extreme length of the fragment,.... 13,6 Depth of jaw behind the last molar,.. 5,1 Ditto in the middle, ... 3,8 Ditto at commencement of diastema, 2,6 Length of six molars, ... 7,1 Length of diastemal portion, ... 2,3				
304	Equus Sivalensis	Lower half of left femur, attached by the anterior surface longitudinally to the shaft of the humerus of the Rhinoceros, No. 302. Shewing a portion of the shaft, both condyles, the rotular pulley and the characteristic pit on the shaft above the outer condyle. Probably belonged to the same animal as the jaw.				
305	Do.	Fragment comprising the symphisial portion of the interior axillaries, broken off on the right side close to the symphysis, the greater part of the diastema remaining on the left: presenting the six incisor teeth in situ of a young adult (say five or six years old) the permanent teeth being all out: and the bases of the cups of the central incisors not yet worn off, the middle ones being large; unluckily the crowns of all these teeth have been more or less injured by attrition and the form	Sewalik Hills.	...	Unknown.	No mark or indication whence this valuable specimen came. It requires further and more minute comparison.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/305		of the outer incisors is not seen: except that there is a rather deep vertical groove upon the inner and posterior surface of the outermost, differing from what is seen in the English Horse. A shallow vertical furrow is also seen upon the outer surface of the two outer incisors. The size of the specimen corresponds very closely with that of the same parts in the English Horse cranium compared with No. 303.				
306	Equus Sivalensis	Lower end of femur, right side shewing the condyles and articular surfaces nearly entire, with a small part of the shaft attached. The condyles are quite entire and the inner border of the rotular pulley presents the characteristic large salient projection.	Sewalik Hills	...	Col.Colvin ?	No mark or number.
307	Do.	Fine fragment comprising part of the horizontal ramus right side, broken off immediately behind the last molar and in front through the posterior half of the third premolar: shewing three entire teeth, and part of a fourth, viz., the	Do. near Nahun.	J. A. S. Vol. VI. p. 899.	Conductor Dawe.	No. 33, of Dawe's Cat.

		three true molars and last premolar, the last molar is only partially worn, shewing the animal to have been a young adult. The size and pattern of the crown agree very closely with the specimen No. 303. The fossil is black, hard and heavy, and the teeth finely preserved. The large flexures of the enamel plates well shown.				
308	Do.	Detached molar upper jaw right side.	Sewalik Hills.	...	Unknown.	No mark or record.
309, 310, 311	Do.	Three molars, upper jaw, detached; one of them much worn.	Do.	...	Do.	Do.
312, 313, 314	Do.	Three detached molars, lower jaw.	Do.	...	Do.	Marked Nos. 261 and 263.
315	Equus, Hippotherium antelopium.	Lower end of radius, right side.	Do. ?	...	Do.	No mark.
316	Do.	Fragment comprising the carpus, left fore leg, and metacarpals united in the natural manner; the metacarpus broken about the middle of the shaft; the upper part of the lateral metacarpals shewn. Of small size.	Do.	...	Col.Colvin?	No mark. Imbedded in claylmar matrix.
317	Sus.... ?	Conglomerated specimen, consisting of a mass of bones cemented together by clay marl and crossing each other in every	Do.	J. A. S. V. p. 669 Pl.XXXIV.	Col. Colvin.	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 317		direction: the principal object being the lower jaw, nearly entire, of a *sus*, exposed so as to shew the two horizontal rami with the remains more or less of seven molars on either side, the bases of both canines and more or less of the six incisors. The specimen is still much covered with matrix; the four premolars on the left side shew part of their crowns: on the right side the first premolar is close to the canine: the true molars are well worn: the canine on the left side shews a part of the tooth bending outwards, but the apex broken off. The other bones are so much covered by matrix as to be undeterminable.				
318	Sus.... ?	Fragment comprising the posterior part of upper maxillary right side, containing the two last teeth in situ: the penultimate is well worn shewing a very complex pattern of crown; the last molar is half worn.	Sewalik Hills ?	...	Col. Colvin ?	
319	Do.	Fragment of lower jaw, right side, comprising posterior part of horizontal ramus,	Do. near Nahun.	...	Sergt. Dawe.	No. 26, of Dawe's List.

		broken across horizontally near the base of the teeth, and containing the last two molars, the penultimate well worn with very flexuous enamel; the last molar in germ and of very large size.				
320	Do.	Mutilated fragment comprising part of the last true molar, much broken and cemented with matrix.	Do.	...	Col. Colvin.	No. 186, of B. and D.'s Cat.
321	Do.	Fragment comprising the posterior part of horizontal ramus lower jaw right side, containing the two last teeth in situ: they are in the same condition of wear as No. 319, but considerably smaller.	Do.	...	Do.	No number.
322	Rhinoceros. ——— ?	Fragment of lower jaw, right side, of a young animal, containing one milk molar emerged from the alveolus and quite entire.	Do.	...	Do.	No. 151, of B. and D.'s Cat.
323	Do.	Fragment of lower jaw, comprising an anterior molar, the top of the crown of which is slightly touched with wear.	Do.	...	Do.	No number.
324	Do.	Molar of upper jaw, nearly entire, with part of palate attached.	Do.	...	Do. ?	Do.
325	Do.	Fragment of molar consisting only of the outer plate of enamel.	Do.	...	Do.	No. 154, of B. and D.'s Cat.
326	Do.	Entire outer incisor, lower jaw right side, resembling in form a good deal that of Rhin.——— ?				

SEWALIK SPECIMENS.

No	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 327	RUMINANTIA Sivatherium giganteum	Fragment of lower jaw, left side of a very young animal, shewing one molar imbedded in germ in the alveolus, and part of one in front emerged from the alveolus. These are probably the last milk molar and the first true. The specimen includes behind the base of the ascending ramus and coronoid. The tooth in germ exhibits well the peculiar rugous reticulation of the enamel, so characteristic of the genus. The section in front shews the molar pressing down nearly to the inferior border of ramus with a very limited dentary canal.	Sewalik Hills ? near Nahun.	...	Cond. Dawe.	No. 27, of Dawe's List.
328	Do.	Detached molar, lower jaw, with crown worn, covered with a little sandstone matrix.	Sewalik Hills.	...	Col. Colvin ?	No. number.
329	Do.	Superb specimen, of the horn, shewing the basal snag and nearly the whole of the broad leafy expansion, broken off only towards the apex: the convex surface shews four deep wavy ramified channels for blood-vessels of very large size and converging near the base: the horn	Swalik Hills Ganawer Khal near the Haripal branch of the Sombe River.	J. A. S. IV. 506, pl. 44, fig. 3, also V. 184, D. 3, 4.	Cond. Dawe.	This antler was found connected by matrix to the cervical vetebra fig. 2, of pl. 44, Vol. IV. J. A. S. and both were described by Lieut. Baker as a

		is convex on its . . . . surface and concave on the other. It is very thick at the inner border, and becomes thinner outwards and upwards; the general form of the specimen is an irregular trapezium. The figure by Lieut. Baker shews the form and characters of the antler very well.				fossil elk. This specimen was in three fragments.
330	Do.	Fragment comprising half the molar of a *Sivatherium.*	Sewalik Hills.	...	Col. Colvin.	No. 335, of B. and D.'s Cat.
331	Do.	Fine specimen of second cerv. vert. nearly entire and deficient only at the anterior and upper part of the spinous process. The bone had belonged to an old animal as the epiphyses are completely synostosed and the ridges and depressions strongly marked. The vertebra is remarkable for the very great width of the posterior surface measured at the extremities of the aliform expansion of the transverse processes, this dimension considerably exceeding the entire height. The body of the bone is broad at the upper articulating surface, the odontoid process thick, and there is a very rapid contraction immediately below the vertebrary foramen, which is situated high up on either side: the median ridge	Do. and as 329.	J. A. S. Vol. IV. p. 506, pl. 44, fig. 1. also Vol. V. p. 184. D. 5.	Cond. Dawe.	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/331		along the under side of the body is in great relief and thick and prominent at its extremity. The form of the body differs from that of all other ruminants in the great divergence and spread of the posterior continuation of the inferior transverse processes, which terminate in a thick projecting mass, instead of being inflected downwards and inwards as in the bovine ruminantia: the spinous process also differs remarkably, inasmuch as it appears to have been a short thick mass instead of a leafy expansion as in most other ruminants. The inferior articulating surface is partly concealed by matrix, but it appears to be oblique and deep; the posterior oblique processes are broad and flat. The length of the superior vertebral laminæ is short as compared with other ruminants. The projecting edge of the odontoid process is slightly broken off. In the aggregate of its characters, the axis of the *Sivatherium* is remarkable for shortness and thickness.				

		Dimensions. Length of vert. measured from termination of posterior inferior surface to edge of odontoid, ... 7,2 From ditto to margin of anterior articular surface, ... 6,1 Width of articulation with atlas, ... 5,6 Ditto of constriction of body, ... 3,6 Ditto between the posterior terminations of the transverse processes, partly restored on the right side, .. 9,5 Vertical diameter of vertebral canal, 1,9 Transverse ditto, ditto, ... 2,				
332	Sivatherium giganteum.	Specimen of cerv. vertebra, probably the fourth, more mutilated than the axis. The anterior and posterior articulating surfaces of the body present, as also the two posterior oblique articulating surfaces; the anterior oblique articulating process on the right side is partly shewn, on the left broken off at its base, as also the spinous process: on the left side a part of the superior and inferior transverse processes (Owen) is shewn: on the right they are broken off close to their base. A good deal of matrix remains on the fossil, concealing some of the parts. The	Sewalik Hills and as 329.	J. A. S. Vol. IV. p. 506, pl.44, fig.2.	Cond. Dawe.	D. 6.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/332		anterior articulating head of the body is ovate in its outline as in the ox, but more vertical in its direction. The posterior articulating cup is very deep. The posterior oblique articulating processes are very broad. Vertebrary foramina large with a short canal. The bone is too much mutilated to afford dimensions, but corresponds in dimensions with the axis, and was found in the same place adhering to the large antler No. 329. All three probably belong to the same animal.				
333	Sivatherium giganteum.	Sixth cervical vertebra, shewing the anterior and posterior articulating surfaces, the former nearly entire; the bases of the anterior and posterior oblique processes present, but the articulating surfaces broken off, as also the spinous and transverse processes. Vertebrary foramen is present on left side of enormous size with an exceedingly short canal. The articular head of the body is very convex and broad and less pointed down-	Near Nahun. This probably came from the same place as the three last.	J. A. S. Vol. VI. p. 899.	Cond. Dawe.	No. 9, of Dawe's List.

		wards than in the ox; its general direction being also more vertical. The length of the body is very short for the other dimensions. *Dimensions.* Vertical diameter of articular head, .. 3,4 Transverse ditto, ditto, ... 2,6 Vertical ditto of vertebrary foramen, 1,1 Transverse ditto, ditto, ... 1,1				
334	Do.	Mutilated specimen of vertebra, (either last cervical or first dorsal) presenting the greater part of the body with the articular surfaces entire, but the neural arch and apophyses broken off: less mutilated on the right side than on the left, and it is there seen that there was no vertebrary foramen; the posterior articulating surface shews, on its right margin, the smooth depression of a costal articulation: the anterior articulating surface is very large, globular, and projecting; the posterior shews a deep cup, which is oblique in its vertical direction, indicating that the bone is probably the last cervical. Too much mutilated to furnish any dimensions.	Sewalik Hills.	J. A. S. Vol. VI. p. 899.	Conductor Dawe.	No number, but probably No. 10, of Dawe's List.
335	Sivatherium.	Lower end of humerus left side, shewing the whole of the articular head with only				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S / 335		a short portion of the shaft. Shaft continuous with the inner condyle, the outer condyle projecting outwards with great obliquity as in the Rhinoceros. The outer condyle shews markedly the projecting ridge bisecting its articulating surface, as is normal in the ruminants. *Dimensions.* Width of articular surface at lower border, ... 5,9 Ditto greatest width at the upper part of outer condyle, ... 7,25 Breadth of articular surface inner condyle, ... 3,9 Ditto outer ditto, ... 2,65				
336	Sivatherium.	Fragment comprising the upper half of the antibrachium right side, shewing a considerable portion of the shaft and the whole of the articular surface of the radius, which is entire; the olecranon broken off; a small splint of the ulna adhering to the shaft. The articular surface of radius shews the depressions for the corresponding surface of the humerus: the inner is large and nearly circular	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	Marked No. 44, but the No. refers to lower jaw of Elephant in B. and D.'s Cat.

		inclining obliquely inwards to a lower level than the outer. The outer side of the bone is marked by a salient tuberosity. Shaft contracts rapidly from the articular surface, and in front, immediately below the outer articular surface, there is a deep rough pit. *Dimensions.* Extreme width of articular head, .. 7,1 Transverse diameter of articular surface, ... 5,8 Ditto of inner surface,..... 3,2 Ditto of outer ditto, ... 2,8 Antero-posterior diameter of inner surface,..... 2,85 Ditto of outer ditto, ... 3,3				
337	Do.	Nearly counterpart of No. 336, but of the left side and of smaller size. It shews the articular surface still more perfectly and more especially the part in apposition with olecranon.	Do.	Do.	Do.	No. 433, of B. and D.'s Cat.
338	Do.	Fine specimen of cervical vertebra, probably the fifth, shewing the whole of the body and the greater portion of the apophyses. It agrees very closely in general form and dimensions with No. 332, the various processes being more entire, but more concealed by matrix, the body is	Do.	...	Conr. Dawe	This specimen in conjunction with Nos. 332, 333 and 334, shews the four last cervical vertebræ, the Atlas and third being alone wanting in the collection.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/338		short, the anterior articular head forms a broad oval broader and more abruptly pointed than No. 332. The posterior articular cup, is nearly circular, deep, and with a raised rim. It is very oblique in the vertical direction. The superior and inferior transverse processes are separated from each other by a broad fossa as in *Bos*. The oblique processes shew broad articular surfaces and the base of the spinous process presents a stout projection with an oval section. A good deal of sandstone matrix fills the intervals between the different apophyses, the special canal and the vertebrary foramina. *Dimensions.* Length of body from articular head to posterior border of articulating cup, ... 6, Vertical diameter of articular head, .. 2,9 Transverse ditto at base, ... 2,3 Vertical ditto of articulating cup, ... 3,3 Transverse ditto, ditto, ... 2,8				

339	Sivatherium.	Lower end of humerus, left side, shewing both condyles with a portion of the shaft attached; the inner condyle as in No. 335, the dividing ridge upon the articular surface of the outer condyle is very prominent; and the articular surface is in fine preservation. The exterior surface of the outer condyle forms an irregular depressed disk. This specimen is in two pieces.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No.393, of B.&D.'s Cat. This specimen is of smaller size than No. 335, but the articular surface is better preserved. It agrees in size with the articular surface of radius No. 337, so as nearly to match.
340	Do.	Fine fragment comprising the inferior half of the right antibrachium, the fibular portion being broken off, but shewing the whole of the articular surface of the radius, which agrees very closely with that of the bovine ruminants, the bone is enormously large when compared with the radius of the recent Gour. *Dimensions.* Length of fragment, ... 9,5 Width of articulating head, ... 5,6 Antero-posterior diameter of head at the inner side, ... 3,5 Transverse diameter of shaft where broken, ... 3,9 Vertical ditto, ... 2,8 The medullary cavity is filled with a solid mass of crystals of carbonate of lime.	Do.	Do.	Do.	No. 447, of B. and D.'s Cat.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/341	Sivatherium.	Lower end of radius left side, resembling exactly the former, but still more perfect in its articular surface, which is as complete as in a recent bone. The dimensions are smaller than in the preceding specimen. Width of articulating head ..... 5,1 Height of styloid apophysis of ulna, 1,3	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 444, of B. & D.'s Cat. Bears also a Ticket No. 352.
342	Do.	A similar specimen of same side, alike in every respect, except the portion of the shaft is shorter.	Do.	Do.	Do.	No. 440, of do. Bears also a No. 244.
343	Do.	Another of the same side, agreeing in every respect, except the shaft of the bone is considerably longer, comprising the lower two-thirds. Dimensions smaller than the two last. Probably belonged to a female. The shaft of the bone instead of being broad and flat is compressed laterally, so as to form an angle upwards with considerable depth, shewing a somewhat triangular outline in section.	Do.	Do.	Do.	No. 442, of do.
341	Do.	Fragment of lower end of left radius, the outer portion of the lower articulating surface broken off.	Do.	Do.	Do.	No. 451, of do.

345	Do.	Specimen comprising the inferior third of the right radius, with the carpal bones and upper part of the metacarpus connected together by matrix; the two principal bones being bent, so as to be nearly parallel to each other. The bones are so enveloped by matrix as to present no distinct character, the core of the metacarpal is divided in section by a vertical plate of bone shewing its composite nature. *Dimensions.* Width of articulating head of radius partly broken off, ... 5,4 Ditto of head of metacarpus; 4,8	Do.	Do.	Do.	No. 450? of do.
346	Do.	Fine specimen consisting of the left metacarpus perfectly entire, cleared of matrix. The bone corresponds exactly in the form of its articular terminations with the same bone in the Gour, but is proportionally shorter, thicker and broader in its dimensions. The articular epiphyses are synastosed, indicating the animal to have been adult, but probably a female, as it is considerably smaller than No. 345.	Do.	Do.	Do.	No. 481, of do.

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S/346		*Dimensions.* Length of bone, ... 1—1, Transverse diameter of carpal articulating surface, ... 4,3 Antero-posterior ditto inner side, ... 2,4 Ditto outer side, ... 1,8 Transverse diameter of inferior articular surface, ... 4,3 The interval between the divisions of the articular ends below is very narrow and the salient ridge between the pulley surfaces very salient as in *Bos*.				
347	Sivatherium.	Fine specimen comprising the upper half of the tibia, shewing the whole of the articular surface nearly complete; the form agrees closely in every respect with that of *Bos:* the posterior outer angle being deflected downwards exactly as in *Bos:* the longitudinal ridge along the shaft proceeding from the tubercle is thick and massive with a deep fossa on its outer side.	Sewalik Hills.	...	Purchased at auction along with head of *Elephas insignis.*	

		Dimensions. Length of fragment ..... 9,2 Transverse diameter of articular head, 6,8 Antero-posterior diameter of inner articular surface, ... 3,5 Ditto of outer, ... 3,8				
348	Do.	Fragment comprising nearly the whole length of the shaft of the right tibia with the articular surface below, the superior broken off a little below the tubercle: the articular surface corresponds closely with that of the *gour;* the bone being proportionally much thicker and shorter. *Dimensions.* Length of fragment, ... 1—3,5 Transverse diameter of articular head, 5, Antero-posterior ditto of outer cup, 3,5	Do.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 425, of B. and D.'s Cat.
349	Do.	Lower end of left femur, presenting the condyles and rotular pulley with a short portion of the shaft. A good deal of obliquity of direction of the rotular pulley from within outwards; borders of pulley more or less injured; condyles nearly of equal size; form and depression closely resembling what are seen in *bos.*	Do.			

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/349		Length of fragment, ... 8,5 Transverse diameter of articular head, 6,1 Interval between condyles, ... 1,4 Length of rotular pulley, ... 3,7 Antero-posterior diameter inner condyle, ... 3,6 Transverse ditto, ... 2,4 Antero-posterior diameter outer condyle, ... 3,7 Transverse ditto ditto, ... 2,1 The form of shaft of bone not well shewn.				
350	Sivatherium.	Astragalus, right, nearly entire, partly covered with matrix, but the impressions and articular surfaces sufficient to shew that it resembles in general form the astragalus of *Bos*, the proportion being thicker, broader and shorter. Length of bone, ... 4,8 Width of lower articular, ... 3,3 Ditto upper ditto, ... 3,4	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 532, of B. and D.'s Cat.
351	Do.	Compound bone of tarsus including scaphoid, cuboid and two cunei forms, of left side.	Do.	Do.	Do.	No. 454, of do.

		General form and articular surface like the ordinary ruminants. Transverse diameter, ... 4,5 Antero-posterior ditto, ... 4,5				
352	Do.	Left calcaneum, apophyses broken off but presenting the whole of the articular surfaces as distinctly as in the recent bone. Length of fragment, ... 5,3 Ditto astragalus articulation, ... 3,3 Height of bone, ... 3,8	Do.	Do.	Do.	No. 538, of do. Bearing a Ticket No. 243.
353	Do.	Right calcaneum, presenting the whole of the long apophysis and the base of the articulation with the astragalus; lateral portion broken off. The bone is short, thick and stout. Length of apophysis to articular surface, ... 5, Height of ditto, ... 2,8	Do.	Do.	Do.	
354	Do.	Lower end of right tibia, presenting the whole of the articular surface with an extraneous piece of bone adhering to the side.	Do.	...	Do.	No. 418, of B. and D.'s Cat.
355	Do.	Proximal metacarpal or metatarsal phalanx of outer toe, left side: a thick and massive bone as compared with the ordinary ruminants. The proximal articulation very deep, distal very unequal and oblique.	Do.	Do.	Do.	No. 552, of do. Bearing a Ticket No. 293.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 355		Length, ... 5,1 Height of proximal articular, ... 2,5 Width of ditto, ... 2,5				
356	Sivatherium.	Ditto, ditto outer toe right side, resembling the last, but infiltrated with iron.	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 561, of B.&D.'s Cat. Ticket No. 302.
357	Do.	Proximal phalanx of outer toe of smaller size than the two last.	Do.	Do.	Do.	No. 558, of do.
358	Do.	Ditto nearly corresponding in size. These two, (Nos. 357 and 358,) probably of foreleg.	Do.	Do.	Do.	No. 557, of do.
359 360 361	Do.	Three fragments of ditto, presenting only the proximal articulation.	Do.	Do.	Do.	No. 361, is marked No. 555, of B. & D.'s Cat.
362	Do. ?	A proximal phalanx of smaller size than No. 358: almost of the size and form of *Giraffe*.	Do.	Do.	Do.	No. 554, of do. Is it Camelopardalis ?
363	Do.	A fragment in two pieces of ditto, presenting the distal articulation and body.	Do.	Do.	Do.	No. 560, of do.
364	Do.	Middle phalanx of toe large size, very short.	Do.	Do.	Do.	Number not legible.

RUMINANTS. *Species generally indeterminable.*

365 to 378		Lower ends of humerus larger than the *Gour*.	Do.	Do.	Do.	367=404, of B. & D.'s Cat. 368=392, of do. 371=398, of do. 372=387, of do. 373=599, of do.
366	Hippopotamus Hexapr. Sivalensis	Lower end of left humerus.	Do.	Do.	Do.	375=386, of do. 381=390, of do. 383=388, of do.
369	Equus Sivalensis.	Lower end of right humerus, shewing only the articulating head somewhat crushed and therefore doubtfully determined, but in the absence of the third pulley agreeing with Horse No. 401, of B. and D.'s Cat.	Do.	Do.	Do.	
379 to 383	Ruminantia	Lower ends of humerus of smaller size.	Do.	Do.	Do.	
384	...	Ditto a fragment.	Do.	Do.	Do.	No. 218, of do.
385 to 388	...	Ditto of smaller size.	Do.	Do.	Do.	385=402, of do. 386=392, of do. 387=389, of do.
389	Equus Sivalensis.	Fragment of upper part of right humerus with articular head and part of shaft.	Do.	Do.	Do.	388=396, of do.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 390	Ruminantia.	Fragment of upper part of humerus with articular head, more or less broken, as large as *Gour*.	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	390=381 of B. and D.'s Catalogue.
391	Equus Sivalensis.	Articulating head of right humerus very perfect but detached from the shaft.	Do.	Do.	Do.	No. 382.
392	Ruminantia.	Like 390 but of smaller size.	Do.	Do.	Do.	No. 383, of do.
393	...	The entire radius and ulna, the olecranon only broken off, left side, larger than *Gour*.	Do.	Do.	Do.	No. 431, of do.
394 to 396	...	Lower end of radius and ulna together, left side, nearly of the size of No. 393.	Do.	Do.	Do.	394=430, of do. 396=452, of do.
397 398 399	...	Lower ends of radius and ulna smaller size, right side.	...	...	...	397=446, of do. 398=452, of do. 399=449, of do.
400	Do.	Two ditto small, about size of *cervus axis*.	...	...	...	400=452, of do.
401	Do.	Ditto ditto ditto.	...	...	...	Do.
402 403 404	Do.	Three entire metacarpals, two of the left and one of the right side, larger in size than the *Gour*.	...	...	...	401=452, of do. 403=527, of do. 405=482, of do.

405	Camelopardus Sivalensis	Upper extremity of right metacarpus, probably of *Giraffe*, so inferred from sudden contraction below articular head.	Near Nahun	J. A. S. Vol. VI. p. 899.	Cond. Dawe.	No. 23, of his list.
406	...	Ditto resembling No. 405, of right side.	Sewalik	J. A. S. Vol. V. p. 184.	Col. Colvin.	No. 507, of B. & D.'s Cat.
407 to 413	Ruminants indeterminable.	Seven fragments of upper extremities of metacarpal bones.	...	...	...	407=514, of do. 408=500, of do. 409=509, of do. 410=508, of do. 411=516, of do. 412=503, of do. 413=505, of do. 414=489, of do.
414 to 421	Ruminants of various species.	Fragments comprising lower end of large metacarpals about the size of *Bos*, each shewing the double articular pulley.	...	...	...	415=471, of do. 416=476, of do. 417=492, of do. 418—473, of do. 419=521, of do. 421=485, of do.
422	...	Small ditto of size of a small deer.	...	...	...	No. 404, of do.
423	...	Another small ditto with a piece of bone attached.				
424	...	Another small ditto.	...	...	...	No. 525, of do.
425	...	Another ditto.				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S						
426 427 428 429	...	Upper ends of femur of a large ruminant size of *Gour*.				
430	...	Small ditto size of a hog deer, black and silicified.	...	...	...	No. 409, of B. and D.'s Cat.
431 432 433 434	...	Mutilated fragments of lower end of femurs of various sizes.				No. 431, subsequently joined to shaft portion. 434=408, of B. and D.'s Cat.
435 436 437	...	Lower ends of large tibias.				436=420, of do. 438=415, of do.
438 439 440 441 442	...	Lower ends of tibias of smaller size.				441=412, of do. 442=417, of do.
443	...	Lower end of small sized tibia with astragalus and peroneal bone attached.				

444	...	Lower end of small tibias of different sizes.				444=421, of B. & D.'s Cat.
445						445=429, of do.
446						446=410, of do.
447	Ruminants of various species.	Lower end of small tibias, size of small deer.				447=424, of do.
448						448=423, of do.
449						449=420, of do.
450	Do.	Astragali of ruminants of different sizes.				450=531, of do.
451						451=550, of do.
452						452=528, of do.
453						453=534, of do.
454						
455						
456						456=535, of do.
457	Do.	Astragalus of a small ruminant.				457=429, of do.
457 to 464	Do.	Calcanea of ruminants of different sizes.				458=547, of do.
						460=368, of do.
						461=545, of do.
						462=546, of do.
						462=551, of do.
465	Do.	Apophysis of Calcaneum, small size.				No. 540, of do.
466	Do.	Compound tarsal bone.				No. 466, of do.
467	Do.	Upper end of metatarsals of large size.				467=506, of do.
468						468=513, of do.
469	Do.					469=495, of do.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 470 to 476	Ruminants of various species.	Upper end of metatarsals of medium size.				472=515, B.& D.'s Cat. 474=498, of do. 475=504, of do. 476=499, of do.
477 478	Do.	Upper end of metatarsals of the size of small deer.				477=510, of do. 478=517, of do.
479		Lower end of metatarsal with articular epiphysis partly detached, of very large size, probably young Sivatherium.				
480	Do.	Ditto with lower jaw of antelope attached by matrix.				No. 312, of do.
481	Do.	Two lower ends of large metatarsal.				481=489, of do.
482	Do.	Ditto ditto.				
483 to 488	Do.	Lower ends of metatarsals of the size of Bos.				443=480, of do. 485=520, of do. 486=469, of do. 487=487, of do.
489 to 498	Do.	Fragments of lower ends of metatarsals of small size.				490=467, of do, 493=468, of do. 494=476, of do. 496=578, of do. 497=511, of do.

499	Do.	Fragment of shaft of metatarsal, medium size.	...	...	...	No. 512, of B. and D.'s Cat.
500	Do.	Lower end of large metatarsal, with articular epiphysis, imperfectly united.	Near Nahun	J. A. S. Vol. VI. 899.	Conr. Dawe	No. 21, of Dawe's list.
501	Do.	Compound tarsal bone of large size.	Sewalik Hills.			
502	Do.	Two specimens comprising upper ¾ths of femur of a middling sized *cervus*, probably of the same individual.	Do.			
503						
504	Do.	Three-fourths of lower portion of tibia of same species, covered with same matrix.	Do.			
505	Do.	Lower end of femur together with upper end of tibia, also lower end of tibia, the three connected by matrix.				
506	Do.	Lower half of humerus with a considerable portion of shaft, large size.				
507	...	Lower end of humerus, outer condyle broken off.	...	...	...	No. 288, of B. & D.'s Cat.
508	...	Upper end of radius with part of olecranon.	...	...	...	No. 187, of do.
509	...	Upper portion of radius with articular head.				509=452, of do.
510						511=436, of do.
511						
512		Upper portion of femur with large trochanter broken off.				No. 219, of do.
513	...	Bones of the extremities of a deer, crossing in every direction and connected by matrix.	Maginund clay deposit.	...	Col. Colvin.	

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 514	...	Scapula with fore and hind legs of a deer, crossing each other in every direction and partly covered by matrix.				
515	...	Upper end of radius and ulna with olecranon.				No. 527, of B. and D.'s Cat.
516	...	Upper end of radius of small ruminant.				
517 518 519 520	...	Fragments of horizontal ramus of lower jaw with molars of antelopian ruminants. No. 520, shews last milk molar in situ.				517=315, of do. 518=289, of do. 519=503, of do. 520=298, of do.
521	...	Fragment of lower jaw containing two molars in situ.				No. 287, of do.
522	...	Ditto of bovine animal, containing two molars, which shew the intermediate accessary columns between the barrels.				No. 285, of do.
523	...	Fragment lower jaw horizontal ramus of Bos, containing last molar.				No. 317, of do.
524	...	Fragment horizontal ramus of lower jaw containing two molars of a Bos.				

525						525=328, of do.
526						526=341, of do.
527						527=343, of do.
528						528=332, of do.
529						
530						530=333, of do.
531						
532						532=331, of do.
533	...	Detached molars, upper and lower jaw of various ruminants.				
534						534=291, of do.
535						
536						536=240, of do.
537						537=329, of do.
538						
539						
540						
541						
542						
543						
544						
545						
546	...	Detached molars of small ruminants.				
447						
548						
549						
550	...	Superior maxillary left side containing the two last molars in situ of a deer, species indeterminable.				No. 282, of do.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 551	...	Upper maxillary left side, containing five molars, crowns covered over with matrix, species indeterminable.	...	...	...	No. 339, of B. and D.'s Cat.
552	...	Superior maxillary, left side, with the last three molars well preserved in situ, of a species of deer.	...	...	...	No. 344, of do.
553	...	Upper maxillary, right, of a small deer, containing the three last molars in situ.	...	J. A. S. Vol. V. p. 183.	...	No. 310, of do.
554	...	Lower jaw, left, comprising horizontal ramus and part of ascending ramus, with three molars in situ of a small deer.	Nahun.	...	Con. Dawe.	No. 32, of Dawe's List.
555	...	Upper maxillary, right, of a small deer, containing three molars, a good deal covered by soft matrix.				
556	...	Upper maxillary, left, with part of palate containing three molars in situ, of a small deer, like No. 553.	Sewalik Hills.	...	Col. Colvin.	No. 311, of B. & D.'s Cat.
557	...	Part of horizontal ramus, lower jaw, left side of a small deer, containing three molars, and the germ of a fourth protruding.				
558	...	Lower jaw, left, comprising greater part of horizontal ramus, shewing four molars in				

		situ, but the two last broken off; the specimen a good deal covered with matrix.				
559	...	Detached molar, upper jaw of a ruminant.	Do.	Do.	Do.	No. 330, of do.
560	Camelopardalis Sivalensis ?	Fine fragment, comprising the lower jaw, right, with three milk molars in situ, and the germ of the first true molar imbedded in the jaw. The teeth are well preserved, the two posterior premolars being only slightly touched by wear, the third milk molar shews the three barrels and composite form characteristic of that tooth ; the surface of the enamel presents in a well marked manner the peculiar netted rugosity, which distinguishes the teeth of the *Sivatherium* and *Bramatherium* and *Giraffe*. The jaw evidently belonged to a young animal. The body of the horizontal ramus is thick, a portion of the diastem remains which is thick and low : there are no materials of comparison to determine with certainty to what genus the fossil belongs : but it is inferred from the characters of the enamel and general form to be the lower jaw of a young *Giraffe*.	Do.	Do.	Do.	No. 313, of do.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 561	...	Fragment lower jaw, left, horizontal ramus, with three milk molars of a still younger animal than No. 560, and of smaller proportions, containing the three milk molars of which the most anterior is in germ, and just protruding from the jaw; the germ of the first true molar is seen behind. Enamel surface of this specimen also shews rugous netting; but it is too imperfect for confident determination.	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 316, of B. and D.'s Cat.
562	...	Fine skull of a bovine ruminant, nearly perfect, from the occiput on to the diastema shewing the zygomatic arches, temporal fossæ and the whole of the spheno-palatine region together with two lines of molars in situ; the crowns of those on the left side broken off; the three posteriors on the left side nearly entire: a horn core is present on the left side, absent on the right through a fracture which has carried it off below the base. The cranial part of the skull differs remarkably from all known bovine rumi-	Do. Ganawur Khal.	J. A. S. Vol. V. p. 184.	Con. Dawe.	Marked D 1 of B. and D.'s Cat.

nants in this respect, that the occipital bone appears to terminate at the occipital crest or close to it, and that no part of the parietals enters into the occipital plane. The horns are pyriform in section with a very sharp edge behind and a broad surface in front; they are closely approximated on the brow and start outwards and upwards, but curve forwards towards their tip. The plane of the frontal is flat to between the commencement of the horns and then descends in a sudden curve between the horn cores to meet the plane of the occipital at an obtuse angle. The occipital crest very prominent; orbital rim also prominent, the lachrymary bones present rough tuberosities at the orbital margin as in the bovine group; there is also no lachrymary fissure; the two supra orbitary foramina very large. The nasals are received into an angular fissure of the frontals, their apices ascending nearly to a line with the anterior border of the orbit. The orbits differ in a remarkable manner from those of the ordinary bovine ruminants, in having their greatest diameter in the vertical direction instead of antero-posteriorly

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S 562		posteriorly. Between the supra orbitary foramina there is a raised portion of the surface of the frontal of a horse-shoe shape, about a line in thickness and with a rugous fimbriated margin about two inches in breadth, the sinus at the posterior part passing gradually into the surface of the frontal. This rugous disk is unknown in other ruminants. The maxillaries contract abruptly in front of the orbits; their tuberosities are very prominent. Teeth. The three posterior molars on the left side are well worn, shewing the animal to have been fully adult, and a large accessory pillar, narrow and compressed but of considerable depth, is seen in the sinus between the two barrels of each molar on its inner side as in the bovine ruminants. The palate is broad. *Dimensions.* Teeth from occipital condyles to commencement of diastema, ... 1—0,6				

Ditto from summit of occipital crest to apex of nasals,	8,6				
Width at posterior margin of orbits,	7,7				
Ditto at anterior ditto,	6,	Do.			
Constriction of maxillaries in front of orbits,	5,5				
Ditto of frontals behind orbits,	6,9	Do.			
From base of occipital to summit of occipital crest,	5,1				
Width of occipital region measured at the pars petrosa,	8,5				
Height from surface of palate to frontal,	7,				
Width between outer border of condyles,	3,8				
Distance between occipital crest and base of horn,	1,1				
Length of temporal fossa,	5,5				
Interval between base of horns,	2,				
Height from palate to broken extremity of nasals,	4,5				
Length of contraction between base of horn and posterior margin of orbit,	1,9				
Vertical diameter of left orbit,	2,7				
Antero-posterior diameter of left orbit,	1,9				
Vertical diameter right orbit,	3,				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 562		Antero-posterior ditto, ... 2, Length of line of molars (5) right side, ... 4,9 Greatest width of palate, ... 3,3 Length of left horn core fragment, .. 9, Antero-posterior diameter at base, .. 5, Thickness of ditto at ditto, ... 3, Antero-posterior diameter near broken tip, ... 3,4 Transverse ditto, ... 2,7 The dimensions of the two orbits differ a little in consequence of crushing on the right side. The principal distinctive marks are—1. The occipital not rising above the occipital crest. 2. The great narrowness of the parietal region between base of horn and occipital crest. 3. The close approximation of the horn cores. 4. The short interval between the base of the horn and the posterior border of orbit. 5. Projection of orbits above plane of frontal.				

563	...	Fragment of skull comprising the cranial portion of the same ruminant as 562 with the bases of two horn cores attached. The specimen a good deal coloured with matrix besides being mutilated, the horn cores smaller, and rise more abruptly upwards and outwards.	Sewalik Hills.	J. A. S. Vol. XI. p. 103.	Col. Colvin ?	No mark. This is the Specimen mentioned by Mr. Blyth as identical with Ovis Ammon, or closely allied to it. Vide Journal Vol. XI. p. 103
564	...	Detached fragment of a horn core near base, of same species as 562 but of larger size, Length of fragment, ... 10 Antero-posterior diameter, ... 4,8 Transverse ditto, ... 3,3 It has got the same sharp edge posteriorly and pyriform section as 562.	Do.	J. A. S. Vol. VI. p. 899.	Con. Dawe..	No. 16, of his List.
565	...	Fragment of horn core near tip, right side, of same animal as 562.				
566	...	Fragment of skull of a large ruminant, comprising nearly the whole of the facial portion, with lines of molars on either side in situ but a good deal covered with matrix. So far as can be made out from the characters of the teeth it belonged to a bovine species, shewing the accessory pillar of enamel between the barrels: a portion of the diastema is present. Length of fragment, ... 9,2 Ditto line of molars, right side, ... 5,1 Greatest width of palate, ... 2,9	Do.	Do.	Do.	No. 37, of do.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 567	...	Fragment of cranium comprising upper maxillary of both sides of a small species of *ceavus*, with the three last molars more or less worn; the palate and teeth a good deal covered by matrix, concealing the characters, but a low detached cone of enamel is seen between the barrels of the penultimate on the left side. Length of four last molars, left side, . 2,4 Width of palate between the first true molars, ... 1,3	Nahun.	J. A. S. Vol. VI. p. 899.	Con. Dawe.	No. 20, of his List.
568	...	Mutilated cranium broken off across the orbits, more or less perfect behind, but a good deal crushed, and most of the characters concealed by superficial matrix: but inferred from the bases of the horn cores to have been a large-sized species of *cervus*. The frontal suture is open, shewing the animal to have been young.	Sewalik.	...	Col. Colvin.	No. 325, of B. and D.'s Cat.
569	Antelope.	Fragment of skull, comprising the whole of the cranial portion nearly entire with the occipital and parietal region, right orbit, and the bases of two horn cores, that on the left side 1½ in. long. The	Do.	...	Do.	No. 306, of do.

		animal was of a size between the *Neelghai* and the *Antelope cervicapra ;* the frontal on either side shews a prominent ridge from the base of the horn towards the occiput as in the *Neelghai ;* the frontals are too much mutilated to shew whether there are ridges in front of the horn. The horn cores are cylindrical and appear to start from the brow as in *Ant. cervicapra ;* tympanic bullæ large.				
570	...	Fragment of cranium comprising both maxillaries and the palate of a large ruminant, size of *bos :* six molars on the right side ; the third milk molar not yet shed, and the last true molar in germ : teeth too much covered by matrix to admit of identification. Length of molars, left side, ... 6,8 Interval between teeth at first true molar,..... 3,	...	...	Col. Colvin.	No. 310, of B. and D.'s Cat.
571	...	Cranium of a good sized bovine ruminant in the cranial portion nearly entire together with the maxillaries on to the diastema, nasal bones wanting ; specimen shews core of left horn a good deal abraded, the right broken off, but the specimen is so much enveloped by matrix as to conceal all the principal parts : but the occipital,	...	...	Col.Colvin ?	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 571		parietal and frontal regions resemble 562, of which this may have been a female.				
572	...	Fine fragment comprising lower jaw, right side, shewing the last five molars in situ. The teeth correspond in pattern of crown and accessory pillars with the bovine ruminants; they are well worn and the posterior talon of the last is broken off: the compressed accessory pillar between the barrels agree closely with the corresponding teeth of upper jaw of 562, of which species this was probably the lower jaw. Estimated length of last five molars, 5,5 Length of fragment, ... 5,7 Height to alveolar, behind, ... 2,8 Ditto, in front, ... 1,8	...	...	Col. Colvin.	No. 284, of B. and D.'s Cat.
573	...	Fragment of cranium of an antelope, comprising the left frontal detached, with a thick cylindrical horn core attached, and shewing a part of the cup of the left orbit. It corresponds very closely in size and appearance with 569, and probably belonged to the same species which	Near Nahun	J. A. S. Vol. VI. p. 899.	Con. Dawe.	No. 15, of his List.

		is considerably larger than *Ant. cervicapra.* No appearance of a spiral twist in the core of the horn as in that group of antelopes. Length of horn core, ... 4,5 Antero-posterior diameter, ... 1,7 Transverse ditto, ... 1,6				
574	...	Fragment comprising the terminal portion of a curved and conical horn core, probably bovine, which shews no indication of a ridge on its upper edge. Length of fragment, ... 5,8 Antero-posterior diameter at base, .. 2,2 Transverse ditto, ... 1,9	Near Nahun	...	Cond. Dawe.	No. 17, of his List.
575	...	Portion of base of a thick horn core of a bovine ruminant, presenting a different section from the horn core of 562. Long diameter, ... 4,2 Short ditto, ... 3,8	Sewalik.	...	Col. Colvin ?	
576	...	Fragment of horn core presenting the character of 562 with a sharp upper edge.	Do.	...	Do.	
577	...	Fragment of horn core in two pieces presenting nearly a square section like 575, but of smaller size: fitting a detached frontal portion of cranium. Length of fragment of horn, ... 9,5	Do.	J. A. S. Vol. XI. p. 103.	Do.	Subsequently the frontal portion of this specimen was discovered. It is the specimen referred to by Mr. E.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/577						Blyth, as identical or nearly so, with Capra Sakeen Bl. vide Journal XI. p. 103.
578	...	Fragment of a horn core presenting nearly a square section, with a sharp edge on one side, differing in form from 562.	Sewalik.	...	Col. Colvin.	No. 296, of B. and D.'s Cat.
579	...	Another portion of horn core of similar form to last, with sharp edge on the concave side, belonging to upper part of core. Section nearly triangular.	...			
580	...	Part of cranium of a ruminant shewing only occipital and part of sphenoid of a middling sized ruminant, too defective for further determination.	...			
581	Antelope palœindicus.	Fine cranium of an antelope, comprising two horn cores, both orbits and the facial portion as far as the diastem with the line of molars on either side; the specimen is at once distinguished by the close approximation of the horn cores, by the sudden inclination which the posterior part of the frontal makes with the nasal plane in a line with the middle of the	...	...	Col. Colvin.	No. of B. and D.'s Cat not legible.

		orbits, and by the deep lachrymary fossæ in front of the orbits. The specimen agrees most closely in form and proportion with that figured at Vol. XII. J. A. S. p. 770, figs. 1 and 2, described by Capt. Baker. The horns diverge slightly and at the same time curve backwards and outwards. The species differs very remarkably in form from any Asiatic Antelope known, and Capt. Baker compares it to the Sassaybe or *Acronotus lunatus*. It is considerably larger than Ant. cervicapra—more nearly approaching the size of the *Neelghai*. Occipital and sphenoidal regions entirely wanting. Molar teeth devoid of any accessory pillar between the barrels. Length of fragment from behind the horn cores to commencement of diastem, ... 10, Length of right horn core fragment, 3, Interval between cores at base, ... 0,5 Ditto at 2 inches height, ... 0,8 Antero-posterior diameter of orbit, .. 2,3 Length of line of molars, ... 3,9 Height from alveolar border to middle of nasals, ... 4,2				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 581		The supra orbitary fossæ are very deep and marked as in the Ant. cervicapra and as shewn in Capt. Baker's figure although otherwise described in his paper. The supra-orbitary foramina are very much smaller than in that species.				
582	...	Another specimen very like the last, but more perfect, contained in a mass of matrix enveloping a great number of bones of different animals in all directions, among others apparently the metatarsal extremity of a Sivatherium. The right horn core is of considerably greater length than in No. 581, and diverges outwards exactly as in Capt. Baker's drawing: orbits, zygomatic arches and molars on both sides are present, but covered with matrix.	Sewalik. Hills.			
583	...	Basal portion of right antler of a cervus, size of the *Axis*, shewing the burr and the offset of a basal snag in the manner exhibited by the *Axis*.	...	...	Col. Colvin.	No. 320, of B. and D.'s Cat.
584	...	Another fragment of shed antler like the former but of smaller size and the basal snag broken off.	Sewalik.			

585	...	Posterior part of cranium of a large cervine ruminant, but too mutilated for further identification.	Sewalik.	...	Col. Colvin.	
586	...	Mass of matrix in two great slabs cementing a vast number of bones of various animals, among which can be made out the entire metacarpal of a bovine ruminant, the entire curved radius and metacarpal and other bones of a small ruminant.	Sewalik. Moginund clay deposit	...	Do.	No mark.
587	...	Proximal extremity of the metatarsal of a very large ruminant, comprising the upper two-thirds of the shaft, adhering by matrix to a series of three connected lumbar vertebræ and the commencement of the sacrum, the vertebræ not of a size proportional to the metatarsal.	Moginund deposit.	...	Do.	
588	...	Mass of matrix containing a number of concealed bones among which are discernible the tibia, astragalus and calcaneum of a large ruminant.	Do.	...	Do.	
589		Small mass of matrix, containing end of femur and top of tibia of a ruminant of	Do.	...	Do.	

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S		small horse, too much concealed for precise determination.				
590	...	Mass of matrix containing a vast number of fragments of bones with several articulating heads indeterminable, and one determinable lower end metacarpal of a small ruminant.	Moginund Deposit.	...	Col. Colvin.	
591	...	Mass of matrix containing a number of bones, the principal of which consists of the inferior two-thirds of the shaft and condyles of a large ruminant or horse: the surfaces too much concealed to admit of determination.	Do.	...	Do.	
592	...	Mass of matrix containing a vast number of bones cemented together: among others a large femur and the metacarpal of a small ruminant—one bone with a curved cylindrical shaft requires further examination.	Do.	...	Do.	
593	...	Mass of matrix containing a number of fragments of bone too mutilated for determination.	Do.	...	Do.	

594	...	Small mass of matrix, containing a determinable lower end of humerus, of a small sized ruminant, also the lower end of the metatarsal with the three phalanges en suite connected with it in the natural relative position.	Do.	...	Do.	
595	Camelus Sivalensis.	Fragment of 7th cervical vertebra, comprising the body with the superior transverse processes attached, the oblique processes and neural arch broken off; both articular surfaces shewn, the inferior not completely synostosed, shewing the animal to have been adult but not aged: the body inferiorly is more curved than in the corresponding bone of the dromedary and the median ridge less prominent: also the length of the body posteriorly from the offset of the transverse process to the border of the articulating cup is considerably longer than in the dromedary: the upper articulating head is more globular, and the body proportionally narrower and longer. Length of body, ... 5,5 Width of ditto behind the transverse process, ... 3,3 The two articulating costal surfaces are seen. Nothing shewn as to the course of the vertebrary foramen.	Do.	...	Do.	

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S 596	Camelus Sivalensis.	Lower jaw-fragment, right side, containing three well worn molars in situ, a good deal covered with matrix, horizontal ramus broken off on a line with the teeth in front and behind.	Sewalik Hills.	...	Col. Colvin.	No. 283, of B. and D.'s Cat.
597	...	Fragment shewing three lumbar vertebræ en suite, cemented by matrix, of a large ruminant.	Moginund clay deposit.	...	Do.	
598	...	Three cylindrical bones united by matrix, the radius and ulna, upper extremities of, being determinable.	Do.	...	Do.	
599	...	Metatarsal of a large ruminant in two pieces, lower articulata wanting.	Do.	...	Do.	
600	...	Mass of matrix containing the tibia, tarsus and metatarsus of a small ruminant in connexion.	Do.	...	Do.	
601	...	Mass of matrix containing a vast number of bones closely packed together; the humerus of a small ruminant is determinable.	Do.	...	Do.	
602	...	Ditto containing the metatarsal of a bovine ruminant, a humerus with a radius and ulna and the lower jaw of a small ruminant.				

603	Sivatherium giganteum.	6th cervic. vertebra: body nearly entire, the neural arch broken off, on the right side shewing transverse process and vertibrary foramen—nearly the duplicate of 333, but more mutilated and of smaller size.	Sewalik Hills.			
604	Do.	Nearly entire right calcaneum; shewing all the articular surfaces, and deficient only at the posterior part of the apophysis.	Do. Moginund Deposit	J. A. S. Vol. V. p. 184.	Col. Colvin.	No. 542, of B. and D.'s Cat.
605	Do.	Left calcaneum, apophyses broken off, articular surfaces are shewn.	Do.	Do.	Do.	No. 541, of do.
606	Do.	Right metacarpus, articulating head.	Do.	Do.	Do.	No. 497, of do.
607	Bovine Ruminant.	Skull nearly complete from the occipital condyles on to the diastema, with two lines of molars, both orbits and the right zygomatic arch; both horn cores broken off and the upper lamina of the frontal bone denuded, so as to afford no characters in that part. The skull is nearly of the same size as 574. The molars are far advanced in wear and shew the compressed accessory pillar between the barrels exactly as in 572. Rine of orbits more or less damaged, but the left shews the great vertical height seen in 572.	Sewalik Hills. Sandstone matrix.	Do.	Do.	No. 280, of do.
608	Cervus.	Posterior part of cranium very much mutilated, so as to be otherwise undeterminable, nearly of the size and in the condition of 585.				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 609	Cervus.	Fine specimen of the terminal portion of an antler in good preservation and very remarkable as to form, the beam being curved nearly in the arc of a circle and to a degree unknown in any existing Asiatic species: a small snag is given off about the middle of the fragment. In hard sandstone matrix.	Sewalik Hills.			
610	Ruminant.	Lower end of tibia of medium size.	Do.			
611	Do.	Small, two fragments comprising the opposite sides of the horizontal ramus with the lines of molars, but concealed by claystone matrix.	Moginund. Do.			
612						
613	Do.	Mass of matrix containing four lumbar vertibræ en suite with spinous processes much in relief. Species of large size.	Do.			
614	Do.	Specimen comprising part of sacrum with portion of ileum attached and the last lumbar vertebra.	Do.			
615	Do.	Mass of matrix containing a number of bones, among them the metacarpal of a small ruminant and a flat carpal bone are determinable.	Do.			

616	Do.	Mass of matrix comprising part of the humerus and the cylindrical shaft of a very large bone, probably femur.	Do.			
617	Do. ?	Fragment of spinal column containing four large dorsal vertebræ en suite.	Do.	J. A. S. Vol. VI. p. 899.	Con. Dawe	No. 11, of his List.
618	Do. ?	Mass of matrix containing a number of bones huddled together, undeterminable.	Do.			
619	Do.	Right os innominatum of a large ruminant, comprising the acetabulum entire and part of ileum and ischium.	Do.			
620	Do.	Counterpart specimen but less perfect.	Do.	...	...	A small vertebra adhering.
621	Do.	Mass of matrix containing a number of bones, among which the metacarpal of a small ruminant.	Do.			
622	Do. ?	Mass of matrix containing fragments of bones, undeterminable.	Do.			
623	Do. ?	Mass of matrix containing lower end of a tibia.	Do.			
624	Camelus ?	Upper end of right metacarpal with a wide articulating head suddenly contracting into the shaft. Section of shaft nearly triangular.	Do.			
625	Ruminant.	Upper end of metacarpal of large ruminant.	Do.			
626	Do.	Upper end of crushed metacarpal.	Do.			
627	Cervus.	Foot of a small deer, all the phalanges present except the unguinal on one side.	Do.			

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 628	Ruminant.	Upper end of right metacarpus, shewing a deep groove behind.	Sewalik Hills.	...	...	No. 508, of B. and D.'s Cat.
629	Cervus.	Foot, three phalanges present on both sides.	Do. Moginund.			
630	Ruminant.	Upper end of metatarsal.	Do.			
631	Do.	Lower end left radius.	Sewalik Hills.	..	..	Sandstone matrix.
632	Do.	Lower end of tibia.	Moginund Deposit.			
633	Do.	Upper maxillary left side of a ruminant size of an antelope, containing four or five molars concealed by matrix.	Do.			
634	Do.	Mass of matrix containing several fragments of bone cemented together, shewing two phalanges in connexion with the metacarpal or metatarsal.	Do.			
635	Do.	Shaft of tibia with upper articulating head.	Do.			
636	Do.	Mass of matrix containing a vertebra.	Do.			
637	Do.	Fragment of horn core of large size with irregular triangular section, sharp edge on lower side like 578.	Sewalik Hills.			

638	Do.	Lower end of left humerus.	Moginund.			
639	Do.	Lower end of right tibia with tarsus and metatarsus united, small ruminant.	Do.			
640	Ruminant.	Lower end of femur of a small ruminant.	Do.	...	...	No.407, of B.&D.'s Cat.
641	Do.	Fragment of cranium of a large ruminant probably *cervus*, with bases of pedicles of both horns, but too mutilated for determination. The identification here is put forward doubtfully, as the supposed pedicles are enormously large for a *cervus*, but the characters are irreconcileable with a bovine or antilopine ruminant.	Sewalik Hills ?	...	...	Matrix a greeinsh yellow clay unlike the rest of the Sewalik specimens.
	Reptilia					
642	Leptorhynchus gangeticus.	Fine fragment of cranium without the lower maxilla, deficient only from the muzzle portion in front of the orbits, the whole of the occipital region with the occipital condyle nearly entire. The transverse articular surface of the tympanic bone and a part of the squamous portion adjoining removed, the cranial tablet perfect, as also the two crotaphite foramina, together with both orbits, palatines shewn underneath but pterygoids broken off. The alveoli of only three small teeth shewn on the broken part of the right maxillary. The contraction of the muzzle, the form of orbits, their elevation above the frontal,	Sewalik Hills. Sandstone matrix.	...	Col Colvins.	No. 718, of B. and D.'s Cat.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 642		cranial tablet, form and proportion of crotaphite foramina to orbits and the other adjoining parts, correspond so exactly in every respect, that no determinable difference is perceivable. The skull is larger than that of a Ghurial's head, which measures 19 in. The specimen infiltrated with iron and very heavy.				
643	Crocodilus.	Vertebra.	Sewalik	...	Col. Colvin	No.700,of B. & D.'sCat.
644	Do.	Ditto.	Do.	...	Do.	No. 703, of do.
645	Do.	Ditto.	Do.	...	Do.	No. 702, of do.
646 to 651	Do.	Dermal scutes.	Do.	...	Do.	No. 719 to 724, of do.
652	Leptorhynchus.	Fragment of muzzle-portion of lower jaw of an enormous-sized animal, the left side shewing the empty alveoli of the five anterior teeth of very large size, broken off obliquely backwards, the right side broken off nearly opposite the termination of the last alveolus on the left side and continued backwards, shewing the alveoli of five teeth, four of which	Sewalik Hills?	...	Do.	Marked alligator fossil in J. Prinsep's hand, no other mark or No. but Vol. V. p. 180, of J. A. S. contains a notice of a crocodile of gigantic size with a cylindrical muzzle with teeth projecting

		contain more or less of the teeth, its anterior portion wanting. Dimensions. Length of fragment, ... 1—1,5 Width about middle,..... 9,5 Thickness, ... 4,6 The alveoli of the two first teeth are very large, the third and fourth still larger, the third shewing a diameter of 1,8 in. by 1,4 in.; the sixth tooth is smaller being 1 in. diameter, seventh is 1,4 by 1.2 in diameter, eighth and ninth are smaller.				three inches above the jaw and one inch two lines in diam. (In a note from Dr. Falconer.)
653	Do.	Portion of lower jaw left side, comprising a part of the horizontal ramus behind the symphysis, and containing the alveoli of two teeth. The suture of the opercular bone is visible, alveoli of enormous size, the anterior being about 1 in. 5 lines in diameter. Height of jaw taken opposite last tooth,..... 6,7 Thickness of ditto, ... 5,6 Length of fragment,..... 10,5 Probably belongs to an animal of corresponding size with 652, but it differs in weathering and colour of surface.	Do.			

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S 654	Cheloni-ans Coloso-chelys At-las.	Fine fragment, comprising the anterior portion of the thickened episternum (of the plastron), it is bifid at the apex, behind which it is contracted and supplied underneath with a thick cuneiform keel. No portion of the thin part of the bone near the entosternum is present; the specimen is tinged black, highly infiltrated with iron, and crusted over with a thin coat of gritty sandstone like some of the Ava specimens: but it bears no mark. The tip of the left bifurcation is broken off, the right entire. Length of fragment, ... 1—4 Ditto of thick portion of episternum, to tip of right bifurcation, ... 1—1 Width of thickened part behind bifurcation, ... 6,5 Greatest thickness, ... 5,1		...	...	Col. Colvin, is stated (J. A. S. V. p. 184,) to have presented to the Society, some huge fragment of this gigantic Tortoise, but the specimen in mineral condition is unlike the generality of the Sewalik fossils. It may be from Ava, (Col. Burney) as Dr. F. found numerous fragments of the gigantic Tortoise among the specimens presented to the Geolog. Soc. by Mr. Crawford. This episternum is not of a full sized animal. Dr. F. having met with it $6\frac{1}{2}$ in thick with a diam. of 8 in. at the contracted part.

655	Do.	Marginal part of carapace, posterior end, left side, shewing both the sutures and the impressions of the horny scutes.	Sewalik Hills.			
656	Do.	Marginal portion from near the anterior end of the carapace, fore part, shewing the impression of scutes. Width of thickened marginal portion, 5,4	Do.			
657	Do.	Portion of carapace near vertebral column, shewing a raised part for attachment of a vertebra or for that of the pelvic bones.	Do. ?	...	...	Weathered like the Ava specimens.
658	Do.	Marginal fragment, in mineral condition like 655.	Do.			
659	Do.	Marginal fragment, surface abraded by weathering.	Do.			
660	Do.	Marginal fragment of plastron of a young animal.	Do.			
661	Do.	Marginal fragment of carapace, much weathered, with impression of a scute.	Do.			
662	Do.	Marginal fragment of carapace, character indistinct.	Do.			
663	Do.	Marginal portion of carapace, 2,8 in. thick.	Do.			
664	Do.	Ditto of plastron, much weathered on its upper surface, characters effaced.	Do.			
665	Do.	Central portion of carapace near vertebral column.	Do.			
666	Do.	Ditto ditto.	Do.			
667	Do.	Marginal portion of plastron, much weathered, characters effaced.	Sewalik, An Ava ?			

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 668	Colossochelys atlas.	Large slab of a portion of the carapace, much weathered and characters effaced, so that the exact position is undeterminable.	An Ava ? Sewalik.			
669	Do.	Fragment of carapace much weathered and characters effaced.	Do.			
670	Do.	Small fragment of carapace, ditto ditto.	Do.			
671	Do.	Ditto ditto.	Do.			
672	Do.	Fragment of carapace, ditto ditto.	Do.			
673	Do.	Fragment of plastron, episternal end, not bifid like 654, and either a different species or of different sex.	Do.			
674	Do.	Fragment of plastron, much weathered and well worn, looks like an Ava specimen.	Do.			
675	Testudo.	Left side of plastron comprising the episternal, entosternal and merosternal, separated along the median suture. Episternum thick and overarching the entosternal very much in form and markings as in *Testudo stellata*. This was a small land tortoise, having no connection with the *Colossochelys*, and probably a young animal, judging from the openness of the sutures.	Do.	...	Col. Colvin.	No.700,of B. & D.'sCat. Bears in ink "a puzzler."

676	Equus Sivalensis	Mass of matrix containing calcaneum of *equus sivalensis* with two vertebræ adhering.	Moginund. Do.			
677	Do.	Lower end of right radius.	Do.	...	...	From A. Conolly's specimens.
678	Do.	Five specimens, comprising lower end of tibia, articular surface complete.				
679	Do.	Lower end of metacarpal or metatarsal.	Do.			
680	Do.	Ditto ditto.	Do.			
681	Do.	Lower end of large metacarpal.	Nahun.	...	Con. Dawe.	
682	Do.	Middle phalanx.	Sewalik	...	Col. Colvin ?	
683	Rhinoceros.	Dental extremity of metacarpal with articulate surface, large size.	Do.			
684	Ruminant.	Lower end of right radius with carpus and metacarpal bone, of the size of a deer.	Do.			
685	Do.	Proximal phalanx of size of a large deer.	Do.			
686	Do.	Fragment of ditto.	Do.	...	...	No.562, of B.&D.'s Cat.
687	Do.	Lower end of radius, size of a deer.	Do.	...	...	No. 217, of do.
688	Do.	Upper end, right femur, head broken off.	Do.	...	...	No. 492, of do.
689	Do.	Fragment lower jaw.	Do.	...	...	No. 318, of do.
690	Camelopardalis Sivalensis	Fragment comprising the upper portion of the shaft of the left radius, the articulating head broken off: the bone is much flattened, and its outer border forms a considerable curve, in consequence of the abrupt expansion of the articulating head, and the sudden contraction of the shaft below it. It is not apparent whether the articulating epiphyses had been synostosed: but the bone is nearly equal in	Do.	...	Col. Colvin.	No mark or number of any kind.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 690		all its principal dimensions than the corresponding one of the existing *Giraffe*: but it is considerably more flattened. It has the greyish weathered appearance of a Sewalik fossil of the sandstone matrix. This is a valuable and rare specimen.				
691	Ruminant.	Lower end of metatarsal of large size, articulating head broken off. Corresponding in dimensions with Nos. 467, 468.	Sewalik Hills.	J. A. S. Vol. V. p. 181.	...	No. 696, of B. and D.'s Catalogue.
692	Camelopardalis ? Sivalensis	Left metacarpal: upper third of the shaft with articulating head.	Do.	...	...	Found in A. Conolly's collection. Vide No. 405.
693	Ruminant.	Nearly entire metacarpal of slender proportions united to another leg bone by matrix.	Moginund deposit Sewalik Hills.	...	Col. Colvin.	No mark or No.
694	Sivatherium Giganteum.	A premolar of the upper jaw in the state of germ and untouched by wear, partly covered by sandstone matrix.	Sewalik Hills.	...	Do.	No number.
695	Do.	Dorsal vertebra of large size: the body nearly perfect together with the anterior and posterior articulating surfaces: the posterior cup left side shewing a costal articulation; the transverse and spinous				

		processes broken off: the body shews a sharpened edge underneath along the median line. *Dimensions.* Length of body, ... 3, 9 Transverse diameter in front, ditto, 3, 3 Vertical, ditto, ... 2, 7				
696	Equus Sivalensis	First cervical vertebra (atlas). A fine specimen nearly entire and nearly of the same proportions as the existing horse, but the body somewhat shorter: the spinous tuberosity less prominent and the posterior inferior margin free from a hitch or emargination. The specimen is only defective in the marginal expansion of the transverse processes, where the edge is broken off.	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 374, of B. and D.'s Cat.
697	Do.	Fourth cervical vertebra. Body nearly entire, processes more or less mutilated.	Do.	Do.	...	No. 359, of do.
698	Do.	Fine specimen of the 6th cervical vertebra: body entire: neural arch broken off: Inferior transverse process on left side entire and very broad and massive, more so than in the recent horse: broken off on right side.	Do.	Do.	...	No. 351, of do.
699	Do.	Ditto, 6th cervical ditto, but less perfect but shewing the vertebra foramen on left side.	Do.	Do.	...	No. 350, of do.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 700	Equus Sivalensis	Very fine specimen of the third cervical vertebra: the body nearly entire and formed closely as in the existing horse, with the same broad expansion of the transverse processes delated posteriorly: the lips of both superior and inferior transverse processes together with the neural arch broken off. The form generally resembles that of the same bone in the "Neel-ghai," but it is at once distinguished from the ruminant type by long and nearly concealed vertebrary foramina, the entrance of the artery being close to the margin of the spinal canal.				It bear no mark or number and is probably of Col. Colvin's first presentation.
701	Do.	Seventh cervical vertebra: body nearly entire, neural arch present: but spinous process broken off: distinguished by the absence of a vertebrary foramen: a costal articulation shewn on one side of the posterior surface: closely resembles the same bone in the recent *Eq. Caballus*: The anterior articulating surface broader.	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 348, of B. and D.'s Catalogue.

702	...	Fifth cervical vertebra: body nearly entire: posterior articular surface having the lateral margin broken on the left side, neural arch present, spinous axis styles broken off. Vertebrary canal with a very large opening: a good deal of matrix on the specimen.	Do.	Do.	Do.	No. 353, of do.
703	Equus Sivalensis	Third cervical vertebra presenting the neural arch, the posterior oblique process with articular surface, right side, and also both vertebrary foramina: but the body and leafy expansions of the transverse processes, less perfect than No. 700.	Do.	...	...	No mark or number: probably of Col. Colvin's first series.
704	Do. ?	Mutilated fragment of cervical vertebra, shewing only the posterior cup and a part of the body.	Do.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 356, of B. and D.'s Catalogue.
705	Do. ?	Mutilated astragalus.	Do. Moginund clay bed.	...	...	No mark or No.
706	Do.	Proximal phalanx, fore-leg, of small size, nearly entire.	...	...	...	No mark. Vide No. 682.
707	Do.	Detached fragment of ditto.	? ?	...	...	Of unknown origin.
708	Do.	Detached molar of upper jaw, crown well preserved and just beginning to be touched by wear. The enamel flexures very acute.	Sewalik Hills.	J. A. S, Vol. V. p. 183.	Col. Colvin.	No. 342, of B. and D.'s Catalogue.
709	Do. ?	Detached molar.	? ?	...	...	Of unknown origin.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 710	Hippopotam. Hexaprotod. Sivalensis	Sixth cervical vertebra nearly perfect of a young adult, the posterior articular epiphyses not being synostosed: the neural arch and both superior transverse processes together with both vertebrary canals present: the latter are very short.	Sewalik Hills.	...	Col. Colvin.	No. 366, of B. and D.'s Catalogue.
711	Do.	Another 6th cervical of an older animal, and tolerably perfect, vertebrary canal very short.	Do.	J. A. S. Vol. V. p. 183.	Do.	No. 190, of do.
712	Do.	Dorsal vertebra nearly entire with a considerable portion of the spinous apophysis resembling fig. 3, of Pl. 64, of the *Faun. antiq. sivalensis.*	Do.	Do.	Do.	No. 358, of do. Determined approximately, there being no recent skeleton for comparison.
713	Do.	Another dorsal vertebra but less perfect in the apophysis.	Do.	Do.	Do.	No. 361, of do.
	Ruminantia (undetermined).					
714	...	Portion of a cervical vertebra, undetermined.	Do.	Do.	Do.	No. 346, of do.
715	...	Neural arch ditto, body wanting.	Do.	Do.	Do,	No mark or No.
716	...	A cervical ditto, of medium size a good deal covered by matrix.	Do.	Do.	Do.	No. 347.

717	...	A cervical vertebra, body shown, apophysis wanting, too mutilated to determine. An *Equus?*	Do.	Do.	Do.	No. 352.
718	...	Fifth or sixth cervical of a large animal much covered by matrix.	Do.	Do.	Do.	No. 370.
719	...	A cervical vertebra with prominent spinous apophyses, but too much concealed by matrix to fix its place.	Do.	Do.	Do.	No. 359, of B. and D.'s Catalogue.
720	...	A small cervical vertebra, too much mutilated for determination.	Do.	Do.	Do.	No. 356.
721	...	Mutilated fragment, superior half of the body of an axis.	Do.	Do.	Do.	No number.
722	...	Mutilated specimen of one of the last cervical vertebræ of a large species, neural arch and apophyses broken off, anterior and posterior articulating surfaces entire.	Do.	Do.	Do.	No. 349, of B. and D.'s Catalogue.
723	...	Cervical vertebra (probably seventh) too mutilated for determination. An *Equus?*	Do.	Do.	Do.	No. 234.
724	?	Dorsal vertebra of animal of considerable size, body and neural arch.	Do.	Do.	Do.	No. 201.
725	...	Ditto another of similar form, less complete.	Do.	Do.	Do.	No mark or number.
726	...	A dorsal vertebra of smaller size.	Do.	Do.	Do.	No. 360.
727	?	A dorsal vertebra mostly concealed at the posterior surface by matrix.	Do.	Do.	Do.	No. 205.
728	Equus ?	A cervical vertebra like those of the Horse, but too mutilated for determination.	Do.	Do.	Do.	No. 357.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 729	Undetermined.	A cervical vertebra, too mutilated for determination. An *Equus?*	Sewalik Hills.	J. A. S. Vol. V. p. 183.	Col. Colvin.	No. 355, of B. and D.'s Catalogue.
730	Ruminant. ?	A Lumbar vertebra.	Do.	Do.	Do.	No. 366, of do.
731	...	A ditto ditto.	Do.	Do.	Do.	No. 365, of do.
732	...	A ditto ditto.	Do.	Do.	Do.	No. 365, of do.
733	...	A ditto ditto.	Do.	Do.	Do.	No. 362, of do.
734	...	Two ditto connected by matrix.	Do.	Do.	Do.	No. 362, of do.
735	...	A ditto ditto.	Do.	Do.	Do.	No. 369, of do.
736	?	A mutilated vertebra, dorsal, deformed by *exostosis.*	Do.	Do.	Do.	No. 200.
737	...	A dorsal vertebra.	Do.	Do.	Do.	No mark of number.
738	...	A Lumbar vertebra.	Do.	Do.	Do.	No 359, of B. & D.'s C.
739	...	A small Lumbar vertebra.	Do.	Do.	Do.	No. 363.
740	Ruminant.	Three cervical vertebræ in connexion but concealed by matrix, so as not to be precisely determinable.	Do.	Do.	Do.	No. effaced.
741	?	Body of a Lumbar vertebra, apophyses detached.	Do.	Do.	Do.	No.525, of B. and D.'sC
742	...	A ditto ditto ditto.	Do.	Do.	Do.	No. 528. of do.
743	...	A ditto ditto ditto.	Do.	Do.	Do.	No mark or number.
744	...	A ditto ditto ditto.	Do.	Do.	Do.	No mark or number.

745	...	A nearly entire axis of a larger sized ruminant: shewing anterior and posterior articulating surfaces. Transverse processes partly broken off.	Do.	Do.	Do.	No. 265, of B. and D.'s Catalogue.
746	Ruminant.	Sacrum of a larger sized ruminant.	Do.	Do.	Do.	No. 366, of do.
747	?	Vertebra vertically broken through the body: neural arch attached: but the other parts concealed by matrix. Family undetermined.	Do.	Do.	Do.	No. 252. But that No. in B. and D.'s Cat. loc. cit. is socket of Pelvis!
748	Ruminant.	Sacrum of a large sized animal, the left articular surface broken off.	Do.	...	...	No. mark or number.
749	...	Cervical vertebra nearly entire of a small sized ruminant (shewing a distinct spinous process) about the size of cervical axis.	Do. (Moginund clay.)	Do.	Do.	No. if any effaced.
750	...	A cervical vertebra nearly like the last. This and No. 749, are a good deal elongated like *Hippotherium antelopinum.*	Do.	Do.	Do.	No. 345, of B. and D.'s Catalogue.
751	...	Fifth or sixth cervical vertebra of corresponding proportions to the last two with a slender projecting spinous process.	Do.	Do.	Do.	No. 358, of do.
752	...	A dorsal vertebra nearly entire, the spinous process alone broken about the middle.	Do.	Do.	Do.	No. 361, of do.
753	?	Three cervical vertebra in connexion, of small size, but the bodies covered by matrix so as to be undeterminable.	Do.	Do.	Do.	No. 116, but there must be some error as No. 116, of B. and D.'s Catalogue, is jaw of hippopotamus.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S/754	Ruminantia	Fragment of horn core, sharp at the lower edge and with section like No. 579, of a large ruminant.	Sewalik Hills.	...	...	No mark or number, vide No. 579.
755	Camelus Sivalensis	Fragment of lower jaw, right side, containing a single molar, this being the only specimen besides No. 596 in the collection.	Do. (Moginund clay.)	...	...	No mark or number. Can this be the specimen mentioned J. vol. V. p. 58, as presented by Baker and Durand.
756	?	Lumbar vertebra like No. 744.	Do.	...	...	No mark or number.
757	?	Two small vertebræ covered by matrix and left undetermined. This specimen needs further examination.	Do.	J. A. S, Vol. V. p. 184.	Col. Colvin.	No. 524, of B. and D.'s Cat. but that No. represents a tibia!! J. A. S. V. p. 184.
756	Ruminant.	Fragment, upper jaw, right side, containing the two last molars of a large Bovine ruminant (so judged from the large accessory pillar) but the crown enveloped by matrix leaving the determination doubtful.	...	Do.	Do.	
757	Cervus ?	Small fragment of a cylindrical antler.	?	...	...	No mark or number.
758	?	Fragment of an occipital portion, right side, of a cranium with one occipital condyle,	?	...	...	No mark.

		too much mutilated and covered by gritty matrix for precise determination.				
759	?	Fragment of a large sacrum much mutilated, and inferior surface covered by matrix (undetermined).	Sewalik Hills.	...	...	No mark or number.
760	?	A large Lumbar vertebra, undetermined.	...	...	...	No. 203, of B. and D.'s Catalogue.
761	?	A ditto less perfect, an Hippopotamus ?	...	...	...	No. 204, of do.
762	?	A ditto vertebra, undetermined.	...	...	...	No. 202, of do.
763	?	A dorsal vertebra, the posterior surface dilated with a broad border like exostosis : the counterpart of No. 736.	...	...	...	No mark or number, vide No. 736.
764	Rhinoceros.	Lower end, right tibia, of large size.	Do.	...	Col. Colvin.	No mark or number.
765	Do.	Ditto ditto ditto.	Do.	J. A. S. Vol. V. p. 182.	Do.	No. 173, of B. and D.'s Catalogue.
766	Do.	Ditto ditto left side of ditto.	Do.	Do.	Do.	No. 174.
767	Do.	Ditto ditto right side of ditto.	Do.	Do.	Do.	No. 175.
768	Do.	Ditto ditto ditto of ditto.	Do.	Do.	Do.	No mark or number.
769	Do.	Right and left *Rotulæ* of large size and nearly counterpart specimens (somewhat uncertain having no recent specimen for comparison).	Do.	Do. p. 184.	Do.	Nos. 459 and 461, of B. and D.'s Cat.
770	Do.					
771	Do.	Top of right radius with articular surface.	Do.	Do.	Do.	No. 435, of do.
772	?	Top of left radius resembling the last, articular surface covered by matrix.	...	...	...	No. 443, of do.
773	Rhinoceros.	Astragalus (left) of a small sized species nearly entire (vide No. 287).	...	...	...	No. 247.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S						
774	Rhinoceros.	Proximal extremity of right inner metacarpal? too imperfect for precise identification.	Sewalik Hills.	...	Col. Colvin.	No mark or number.
775	Do.	Fragment distal extremity with articular surface of middle metatarsal of large size.	Do.	J. A. S. Vol. V. 182.	Do.	No. 180, of B. and D.'s Catalogue.
776	Do.	Proximal phalanx of a foreleg.	Do.	Do.	Do.	No. 240, of do.
777	Do.	Proximal extremity of right middle metatarsal.	Do.	Do.	Do.	No. 338, of do.
778	Do.	Distal extremity of inner metatarsal.	Do.	Do.	Do.	No mark in number.
779	Do.	Proximal extremity of middle metacarpal.	Do.	Do.	Do.	No. 159, of B. and D.'s Catalogue.
780	Sivatherium Giganteum.	*Scaphoid* bone of the right carpus. It is considerably larger in proportion in the antero-posterior direction than in the Giraffe and less so in the vertical direction, the articular surfaces being alike.	Do.	Do.	Do.	No mark or number.
781	Do.	*Semi-lunar* bone of the right carpus, it is considerably smaller in proportion than the Scaphoid, No. 780, not much exceeding the semi-lunar of the Giraffe, the posterior inferior articular surface is broken off. If Sivatherium, it must have belonged to a female or small individual.	Do.	J. A. S. Vol. V. p. 184.	Do.	No. 458, of B. and D.'s Catalogue.

782 783	Rhinoceros.	Scaphoid and Semi-lunar of the left carpus of the same individual fitting together and connected by matrix, both of large size.	Sewalik Hills. Moginund clay Bed.	...	Col. Colvin ?	No mark or number.
784	Do.	Scaphoid of right carpus more entire.	Do.	J. A. S. Vol. V. 184.	Col. Colvin.	No. 465, of B. and D.'s Catalogue.
785	Do.	Ditto of right carpus.	Do.	...	Do.	No. 460, of do.
786		Cuneiform bone of left carpus.	Do.	...	Do.	No. 473, (?) of B. and D.'s Catalogue.
787	Do.	Cuboid of left tarsus agreeing in size nearly with Rh. unicornis, but differing in form.				
788	Do.	Fragment of left Scapula, comprising glenoid cavity; tuberosity, and neck spine and lamina broken off; of the size of the Indian Unicorned Rhinoceros.	...	...	Do.	No. 157, of do.
789	Ruminant. ?	Fragment of a left scapula of large size comprising only the glenoid cavity and tuberosity, but both mutilated so as to render any determination doubtful: but most nearly approaching a large ruminant like the Giraffe. An *Sivather.?*	Sewalik Hills.	...	Do.	No. 158, of do.
790	Do.	Fragment of right scapula in two pieces, comprising the glenoid cavity, tuberosity, and the commencement of the spine, greater part of lamina broken off.	Do. ?	...	...	An Ava ? no mark.
791	Do.	A nearly counterpart specimen left scapula shewing glenoid cavity, tuberosity and neck; also like the last belonging to one of the larger ruminants.	Do. ?	...	...	An Ava ? no mark.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 792	Ruminant. ?	Fragment of right scapula nearly of the size and form of 790.	Sewalik Hills ?	...	...	No mark.
793	Do.	Mutilated fragment of scapula, shewing only glenoid cavity, tuberosity and neck, the glenoid cavity very circular with a raised rim: nearly of the size of 790.	Do.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 156, of B. and D.'s Catalogue.
794	Do.	Fragment of right scapula, shewing only glenoid cavity and tuberosity.	Do.	Do.	Do.	No. 379, of do.
795	Do.	Fragment of left scapula, shewing only glenoid cavity.	Do.	Do.	Do.	No. 377, of do.
796	Do.	Fragment of smaller scapula, shewing only cap and tuberosity, right side, of the size of a smaller deer.	Do.	Do.	Do.	No. 380, of do.
797	Do.	Mutilated fragment of right scapula, posterior edge of glenoid, margin broken off, belonging to one of the larger ruminants.	Do.	Do.	...	No mark.
798	Sus.	Fragment of left scapula, of a small-sized animal, with tuberosity nearly confluent with the margin of the cap and a very salient spine and narrow neck, greater part lamina broken off, nearly of the size of 796.	Do.	...	Do.	No. 278, of B. and D.'s Catalogue.
799	Ruminant. ?	Fragment of left scapula shewing greater part of glenoid cavity and commence-	?	...	...	No. mark.

		ment of a large prominent spine, tuberosity broken of; articulating cavity with posterior inferior margin much in relief from the cup and sloping obliquely: a prominent ridge between the spine and inferior or posterior margin; nearly of the size of Hexaprotodon but differs considerably in form.				
800	Bovine.	Fragment of a frontal with the base of a large horn core attached, nearly triangular section.	Sewalik Hills.	...	...	No mark.
801	Ruminant.	Atlas of a larger sized ruminant, much mutilated.	Do.	...	...	No. 375, of B. and D.'s Catalogue.
802	Equus ?	Cervical vertebra, shewing the neural arch and a vertebrary foramen on one side; the posterior articular surface and under side mutilated so as to prevent precise determination.	Do. ?	...	..	No mark.
803	Ruminant.	Lower end metacarpal with the two proximal phalanges en suite, of the size of a deer.	Do.	...	...	No mark. Moginund matrix.
804	Do.	Another small specimen of ditto, but less complete.	Do.	...	...	No mark.
805	Do.	A small fragment shewing the distal or unequal phalanges in natural connection with middle ditto.	Do.	...	...	No mark. Moginund matrix.
806	Do.	Fragment of left antebrachium of a small-sized ruminant, with lower end of humerus, and radius and ulna in connexion.	Do.	...	...	Do.

SEWALIK SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
S 807	Horse ?	Portion of shaft of a radius and ulna in connexion, right side, articular heads broken off.	Sewalik Hills.	J. A. S. Vol. V. p. 182.	Col. Colvin.	No. 413, of B. and D.'s Catalogue.
808	Rhinoceros.	Mutilated fragment of shaft of right (?) femur.	Do.	...	...	No mark.
809	Ruminant.	Distal extremity of proximal phalanx, too mutilated for determination but somewhat like camel.	Do.	...	...	No. 655, of B. and D.'s Catalogue.
810	Do.	Lower end of humerus: left.	Do.	...	...	No mark.
811	Elephant	Head of right ulna.	Do.	...	...	Do.
812	Do.	Middle portion of shaft of left fibula.	Do.	...	...	Do.
813 to 816	Do.	Metacarpal and metatarsal bones—precise determination not attempted.	Do.	...	...	No. 814 = 246 of B. and D.'s Catalogue. No. 816 = 244 of do.
817 818	Do.	Phalangal bones undetermined.	Do.	...	...	No mark.
819	Do.	Carpal bone undetermined.	Do.	...	...	Do.
820	Do.	Calcanecum—apophyses broken off.	Do.	...	...	Do.
821	Do.	Upper extremity of rib with articulating head.	Do.	...	...	Do.
822 to 827	Do.	Fragments of various portion of ribs.	Do.	...	...	Do.

828	—— ?	Articulating heads of lower extremity of femurs.	Do.	...	Col. Colvin.	No. 346, of B. and D.'s Catalogue.
829	Elephant,	Spinous processes of vertebræ, detached.	Do.	...	...	No. 829 = 189, of do.
830						No. 830 = 207, of do.
331	Do.	Detached fragment of ditto.	Do.	...	...	No mark.
832	—— ?	Detached spinous process with articular surfaces.	Do.			
833	——	Fragment comprising the greater part of the ascending ramus with the condyle of the left side of a very remarkable form of jaw, smaller than rhinoceros and considerably larger than the existing horse, but differing from both these genera as well as from the Hippopotamus and Tapir. The condyle presents the same broad ovate form as in the Hippopotamus, but the inner surface of the ramus below it descends vertically without any muscular impression as in the horse; the coronoid process is broken off, but its base appears to have come off from the same level as the condyle and close to it without leaving any neck. Cannot be identified with any known form: certainly belongs to some of the pachydermata.	Do.			
834	Elephant	Fragment of ascending ramus, rear coronoid process, shewing a recent fracture, and probably belonging to some jaw in the collection.				

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 835	Ruminant. ?	Lower end of left femur of large size.	Sewalik Hills.	J. A. S. Vol. V. 182.	Col. Colvin.	No. 142, of B. and D.'s Catalogue.
836	Do.	Upper articular head of Tibia, size of *bos*.	Do.	Do.	Do.	No. 100, of do.
837	Do.	Ditto ditto, larger size.	Do.	Do.	Do.	No. 175, of do.
838	Do.	Ditto ditto, very large size belonging to one of the largest forms among the ruminantia.	Do.	...	...	No mark.
839	Do.	Ditto ditto, much mutilated—size of *bos*.	Do.	...	...	No mark.
840	—— ?	Upper end of tibia with portion of shaft; articular surface too much mutilated for determination.	Moginund.	Do.	Do.	No. 422, of B. and D.'s Catalogue.
841	Elephant.	Dorsal vertebra, a good deal covered with matrix.	Do.			
842	Rhinoceros	Olecranon—mutilated.	Do.	Do.	Do.	No. 453, of do.
843	Hippopotamus	Detached molar, upper jaw.	Do. ? Ava ?			No. 230, of do.
844	Do.	Distal extremity metatarsal or metacarpal.	Sewalik Hills.	Do.	Do.	
845	Ruminant Antelope?	Fragment of upper maxillary, right side, comprising 5 molars en suite of a young animal, of the size of *Antelope cervicapra*, the 5th molar in germ.	Do.	Do.	Do.	No. 150, of do.

846	Hippopotamus.	Fragment comprising a crushed canine. Probably belonging to some specimen in the collection.	Sewalik Hills.			
847	Hyæna.	Cranium nearly entire, deficient only in the right zygometer arch, and in the basal part of occiput, but covered with matrix, and the teeth so mutilated, that only the second premolar is distinctly seen: the incisors and canines in situ but broken off	Do.	...	Col. Colvin.	No. 504, of B. and D.'s Catalogue.
848	Do.	Fragment of cranium a good deal crushed, and mutilated behind the orbits, shewing all the teeth on the right side except the small premolar: the teeth are considerably larger than those of the existing Indian Hyæna. On the left side canine seen in section.	Do.	...	Do.	No. 600, of do.
849	Do.	Fragment of lower jaw, right side containing the 4 molars in situ; teeth larger than in the existing Hyæna, but a good deal concealed by matrix.	Do.	...	Do.	No. 600, of do.
850	—— ?	Part of cranium, too much mutilated and concealed by matrix to be determined.	Do.	...	Do.	No. effaced.
851	Feline.	Fragment of horizontal ramus, lower jaw, right side, containing the 2 last molars in situ: would be about the size of *Felis cristata*: F. and C.	Do.	J. A. S. Vol. V. p. 182.	Do.	No. 603, of do. under the name of Hyæna.
852	Canis.	Upper maxillary, left side, comprising a part of palate and zygometer portion of orbit	Do.	Do.	Do.	No. 602, of do.

SEWALIK SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S 852		with 4 teeth in situ, the 3 posterior of which are entire, agreeing exactly in form with those of *Canis lupus*, but a little larger. No lower jaw in the collection has been found corresponding with them.				
853	Bos ?	Horizontal ramus lower jaw left side: a fragment containing two molars, and part of the socket of a third: of a young animal, the teeth unworn, probably Bovine.	Sewalik Hills.	...	...	No mark or No.
854	Rhinoceros.	The germ shell of a young anterior molar of the upper jaw, with a small piece of bone attached.	Do.	...	...	No mark or No.
855	Do.	Fragment of a large upper molar partly worn.	Do.	...	...	No mark or No.
856	—— ?	Right calcaneum mutilated and undetermined.	Do.	J. A. S, Vol. V. 184.	Col. Colvin.	No. 539, of B. and D.'s Catalogue, but there said to be radius.
857	—— ?	Another right calcaneum left undetermined.	Do.	Do.	Do.	No. 550 of do.
858	Ruminant ?	Upper end of humerus, shewing articulating head; tuberosities broken off so as to be of doubtful determination. Belonged to an animal the size of a large Bovine.	?	...	...	No mark or No. Origin doubtful.

859	Hyæna.	Fragment of hard matrix containing part of the cranium of a carnivorous animal: and shewing canine? and portion of premolar, but much concealed by matrix. An Hyæna?	Sewalik Hills.	J. A. S. Vol. V. 184.	...	No. 601, of B. and D.'s Catalogue.
860	Colossochelys.	A slab of the carapace shewing the deep groove of a large scute.	Do.	...	...	From A. Conolly's specimens.
861	...	Another fragment of ditto less perfect.	Do.	...	...	Do.
862	...	Another fragment of plastron? shewing deep groove of scute.	Do.	...	...	Do.
863	...	Another fragment from near the junction of carapace and plastron?	Do.	...	...	Do.

PERIM ISLAND SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P/1	Mastodon. M. perimensis.	Permanent molar, upper jaw, left side, with four ridges complete, first ridge worn (ante-penultimate).	Perim Island, Gulf of Cambay.	J. A. S. V. 761&VI.79. Fauna A. S. Part 4, pls. 31, 38, 39.	Unknown.	Characteristic specimen.
2	Do.	Upper molar, right side, probably penultimate, with 4 ridges, the first 2 worn.	Perim Island.	Loc. cit.	Do.	Ditto ditto.
3	Do.	Fragment of molar, consisting of outer part of 3 ridges, specimen incomplete.	Do.	Do.	Baron Hugel.	
4 to 12	Do.	Fragments of molars, small (7*a*, 7*b*, 7*c*).	Do.	Do.	Unknown.	The broken fragments of one or two specimens.
13	Do.	Molar, unworn, with 4 ridges and "talon," anterior portion wanting.	Do.	Do.	Do.	Highly characteristic.
14	Do.	Molar, lower jaw? 2 ridges, fragment unworn.	Do.	Do.	Do.	
15	Do.	Portion of molar with fang, amorphous.	Do.	Do.	Do.	
16	Mastodon?	Humerus, lower end, left side, huge size, in two pieces.	Do.	J. A. S. Vol. VI. 79.	Capt. Fulljames.	The largest known.
17	Mastodon?	First vertebra of neck (atlas) of large size, very complete.	Do.	As No. 1.	Unknown.	
18	Mastodon? or elephant?	Cervical vertebra, in 2 pieces, left half of neural arch broken off and lost, belonging to an animal of *enormous* size.	Do.	J. A. S. Vol. VI. p. 79.	Capt. Fulljames.	This must have belonged to a much larger animal (if

						not different specimen) than No. 17.
19	Do.	Dorsal vertebra (anterior) nearly complete. Spinous process of enormous size broken off, costal cup present on left side.	Do.	Do.	Do.	Probably same animal as last.
20	Do.	Lower extremity of a femur, right side, in two pieces, of very remarkable form: with a considerable portion of the shaft attached. The condyles are covered with Perim matrix, which has become partly engrained with the bone, but the general contour is visible, agreeing closely with the elephants and mastodons. But the shaft gradually contracts from above the condyles into an attenuated and comparatively slender shaft, such as is unknown among these types, fossil or recent. The section of the shaft is a compressed oval, with a very sharp edge at the outer side. Can this be a femur of Dinotherium? There are no ascertained remains of that genus in the collection. *Dimensions.* Length of fragment, ... 19.5 Greatest width above condyles, ... 7.5 Antero-posterior diameter of condyle, ... 6. Transverse diameter of shaft at fracture, ... 4.1 Antero-posterior ditto, ... 2.5	Do.	...	Unknown.	

PERIM ISLAND SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
P/20	Mastodon ? orElephant?	The head of the bone is synostosed, shewing that the animal was adult: or at least no indication of separation is discernible.				
21	Do.	Fragment of shaft of femur, in 2 pieces, one side of outer shell, of small size.	Perim Isld.	...	Fulljames ?	Mutilated specimen.
22	Do.	Tibia of right side, upper end with left articular surface.	Do.	...	Do.	
23	Do.	Tusk, fragmented portion, in several pieces connected by matrix.	Do.	...	Do.	This specimen shews the Perim Island matrix well.
24	Do.	Fragmented portion of shaft of leg bone, mutilated, and indeterminable.	Do.	...	Do.	
25	Do.	Fragment of tusk, mutilated.	Do.	...	Do.	
26	Do.	Lower jaw of Mastodon with molar in situ, crown of molar broken off and specimen much mutilated.	Do.	...	Do.	Bears a ticket resembling that on No. 18.
27	Do.	Portion of shell of femur ? matrix attached to the inner surface, mutilated fragment.	Do.	...	Do.	
28	Do.	Anterior portion of lower jaw near the symphysis, left side, containing part of a fang, mutilated.	Do.	...	Do.	

29	Rhinoceros.	Lower jaw, left side, including part of horizontal ramus, posterior angle and ascending ramus, and portion of the last molar: coronoid and condyle broken off: of very large size.	Do.	J. A. S. Vol. VI. p. 79.	Fulljames ?	Made out by the matrix.
30	Do.	Fragment consisting of the superior maxilla left side, containing 2 molars, well worn.	Do.	Do.	Do.	Matrix with marine bivalve-shells.
31	Do.	Lower jaw, right side, consisting of posterior angle with one unworn molar, and portion of ascending ramus, in 3 pieces: of much smaller size than No. 29 and probably of a young animal.	Do.	Do.	Do.	Dark colour, marine bivalves on it.
32	Do.	Fragment of jaw, containing portions of 2 molars: very much mutilated.	Do.	Do.	Unknown.	
33	Do.	Humerus, inferior end, right side, with articular surface.	Do.	...	Do.	Corresponds in size with lower jaw No. 29.
33*b*	Do.	Lower jaw, right side, young animal, containing one molar.	Do.	...	Do.	
34	Equus.	Upper jaw, left side, containing the 2 anterior premolars, well worn, corresponding in characters with Eq. Sivalensis, F. and C. Faun. Sival., pl. 82.	Do.	Do.	Fulljames.	
35	Do.	Astragalus, small size.	Do.	...	Unknown.	
36	Do.	Lower jaw, left side, containing the 4 anterior molars, well worn: truncated in front and behind, agrees with No. 34.	Do.			
37	Do.	Lower jaw, right side, containing the 3 anterior molars, with portion of the diastema in front, and truncated behind.	Do.	Do.	Fulljames.	Ticketed "Perim."

PERIM ISLAND SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P	Ruminantia					
38	Brahmatherium.	Lower jaw, left side, in 2 pieces, containing 2nd and 3rd true molars, truncated in front and behind.	P. I.	J. A. S. Vol. VI. p. 79.	Unknown.	
39	Do.	Lower jaw, left side, containing 4 molars, worn, but more or less broken.	Do.	Do.	Do.	The teeth are, the last premolar little worn, the 1st and 2nd true molar, and the anterior barrel of the third or last.
40	Do. ?	Proximal unguial phalanx, left side leg. It corresponds almost exactly in size and proportion with the same phalanx of the fore leg of existing Giraffe in the Asiatic Society's Museum.	Do.	Do.	Do.	
41	Do. ?	Horn of the Brahmatherium (?) resembling the horn of Sivatherium, figured in Journal of the Asiatic Society, but different. This is a specimen of very great interest.	Do. ?	...	Do.	No certain indication of where it comes from, but resembles in mineral characters, the next fossil (No. 42) which is undoubtedly Perim.
42	— ?	Portion of the shaft of a long bone, apparently the tibia, left side, of a ruminant	Do.			

		resembling the Giraffe and hence inferred to be of Brahmatherium from its larger size.				
43	Camelopardalis sivalensis ?	Humerus, right, in 2 fragments, lower articulating surface perfect, the upper broken off immediately below the head, resembling in form exactly the humerus of the Giraffe, but a little larger.	P. I.	...	...	Inferred to be Perim from the matrix which is very distinct. The surface of the bone much cracked.
44	Do.	Humerus, right, upper extremity with the articulating tubercles broken off, mutilated from above the middle of the shaft, equalling the size of the living female Giraffe.	Do. ?	...	Unknown.	
45	— ?	Portion of lower jaw of a ruminant.	Do. ?	...	Do.	
45*b*	— ?	Left side, containing 2 of the back molars. Ditto ditto.	Do.	...	Fulljames.	
46	Antelope.	Left frontal with core of horn nearly entire and portion of left orbit.	Do.	J. A. S. Vol. VI. p. 79.	Unknown.	This horn core, very cylindrical and slightly curved backward, no spiral turn.
47	Do.	Right frontal with core of horn nearly entire of larger size than 46.	Do.	...	Do.	
48	— ?	Astragalus of large ruminant. Giraffe ?	Do.	...	Do.	
49	— ?	Fragment of core of cavicorned ruminant, round and tapering, in two pieces.	Do.	...	Do.	This horn core has a considerable curve.

PERIM ISLAND SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P/50	Antelope.	Frontal with portion of the orbit and core of horn nearly perfect to the tip; compressed, pyriform in section, sharp edge anterior, left side.	P. I.	J. A. S. Vol. VI. p. 79.	Fulljames ?	
51	Do.	Portion of core of horn, compressed and pyriform in section.	Do.			
52	Camelopardalis ?	Lower end of metacarpal bone, left side, with articulating surfaces, of the size of existing Giraffe.	Do.			
53	Mastodon ?	Middle portion of rib, curved, length 8 inches.	Do.	...	Do.	
54	Suidæ.	Lower jaw, left side, fragment containing merely the last molar of Sus Hysudricus ?	Do.	...	...	Sus Hysudricus figured in Fauna Sivalensis.
55		A portion of No. 50.	Do.	...	Unknown.	
56	Ruminantia.	Cranium from the occiput to the anterior frontal with the bases of 2 horns shewing the frontal and transverse sutures, about the size of Antelope cervicapra.	Do.	Do.	Fulljames ?	
57	Antelope.	Portion of cranium with frontal and parietal, bearing the horn cores Nos. 50 and 55.	Do.			
58	Ruminantia.	Lower end of metatarsal of a moderate-sized ruminant.	Do.			

59	Antelope.	Portion of frontal comprising the orbital part and core of horn, with spiral turn, left side.	P. I.	J. A. S. Vol. — p. —	Baron Hugel.	
60	Camelopardalis.	Second or third dorsal vertebra of Giraffe, concave and convex articular surfaces present, apophyses wanting.	Do.	...	Fulljames ?	Further detailed comparison with the separate vertebræ necessary.
61	Do.	One of the anterior dorsal vertebræ with the apophyses of the left side on. Much mutilated.	Do.	...	...	Ditto, requiring further examination.
62	Do.	One of the dorsal vertebræ ? characters partly concealed by matrix.	Do.	...	...	Requiring further comparison.
63	Sus.	Lower jaw, left side, consisting of portion of horizontal ramus with fangs of 4 posterior molars, also part of ascending ramus of Sus Hysudricus. See No. 54.	Do.	...	...	Crowns of molars broken off.
64	Mastodon.	Portion of Ivory Tusk.	Do.	...	...	Mutilated piece.
65	Rhinoceros.	Lower end of tibia, left side, much mutilated, shewing part of the articular surface ; of larger size than Indian unicorned-rhinoceros.	Do.			
66	Equidæ.	Atlas of a very small-sized horse—Hippotherium antelopinum ? Fauna Ant. Siv.	Do.	...	Unknown.	
67	Hippother. antelop.	Axis, nearly entire, inferior cup wanting ; corresponding in size to No. 66.	Do.			
68	Do.	One of the middle cervical vertebræ with only the superior oblique process, left side, and body otherwise much mutilated.	Do.	...	...	An ruminant ?

PERIM ISLAND SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P	Reptilia.					
69	Crocodilus. Palæindicus F. and C.	Entire cranium in fine preservation, of a crocodile resembling in general form the C. bombifrons of N. W. Provinces.	P. I.	J. A. S. Vol. VI. p. 79.	Fulljames.	Requires minute and detailed comparison with Indian crocodiles.
70	Do.	Portion of lower jaw, right side, behind the symphisis containing alveoli of the large canine and 3 adjoining teeth.	Do.	...	?	
71	Leptorhyncus.	Fragment of lower jaw about the middle, containing the alveoli of 4 teeth on either side, middle-sized animal.	Do.	...	?	Marked Perim.
72	Do.	Fragment, upper jaw, containing 5 alveoli of a small animal.	Do.	...	Baron Hugel ?	Marked H. Perim.
73	Do.	Fragment, upper jaw attached to matrix, specimen broken off at each extremity, containing 6 alveoli on each side.	Do.	...	?	Perim matrix.
74	Do.	Fragment of cranium comprising part of occiput crotophyte foramina and part of right orbit, middling-sized animal.	Do.	...	?	Marked Perim.
75	Do.	Portion of lower jaw both sides, containing the alveoli of 6 teeth with Perim matrix attached.	Do.	...	?	
76	Crocodilus (palæindicus n. s. ?)	Lumbar vertebra with apophyses nearly perfect: of a good-sized animal. An of 69 ?	Do.	...	Fulljames.	Marked Perim.

77	Do.	Fragment comprising the posterior part of the cranium with intercrotophyte tablet, part of crotophyte foramen of right side, foramen magnum and condyle.	Do.	...	...	No mark.
78	Do.	United portion of spine comprising 3 dorsal vertibræ nearly entire in apposition with apophyses, and imbedded in matrix, middle-sized animal.	Do.	...	Fulljames.	No mark.
79	Do.	Portion of spine resembling No. 78 and fitting on to it, making 5 vertebræ en suite.	Do.	...	...	No mark.
80	Crocodilus. *Chelonidæ.*	Detached vertebra, position undetermined.	Do.			
81	Emys.	Vertebrary portion of carapace infiltrated with iron, with marks of 6 dermal plates.	Do.	...	...	No mark, but inferred to be of Perim from matrix. No mark.
82	Trionyx.	Rib-fragment of the carapace.	Do.	...	Unknown.	Marked Perim.
83	*Crocodilus.*	Body of detached vertebra, apophyses removed at the suture.	Do.	...	...	No mark.
84	Pisces.	Detached body of vertebra of shark, diameter transverse 2-25 inches, depth, 1-5 inches, imbedded in Perim matrix.	Do.			
85	*Equus.*	Left calcaneum, nearly entire, of small-sized species.				
86	Antelope ?	Core of cavicorned ruminant, resembling No. 51, in 2 pieces joined.	Do.	...	...	No mark.
87	Crocodilus.	Detached vertebra, apophyses removed.				

PERIM ISLAND SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
P 88	Colossochelys Atlas.	Fragment of thickened margin of carapace consisting of 2 contiguous ribs shewing the connecting suture.	P. I.	...	...	Specimen in P. I. collection—of great importance as indicating the existence of the gigantic Tortoise in Perim Fauna.
89	Do.	Anterior portion of margin of carapace, right side, near junction with episternum.	Do.	...	...	Ditto ditto.
90	Do.	Ischium ? right side, shewing posterior concave border, anterior ditto and part of ilian symphysis. Length 9½ inches, (determination doubtful).	...	...	...	This identification is only put forward as approximative. Microscopic section required for certainty.
91	Do.	Coracoid ? right, consisting of head, neck, and greater part of lamina, the smooth articular surface wanting.	Do.	...	...	No mark.
92	Crocodilus.	Vertebra, imbedded in matrix.	Do.			
93	— ?	Imperfect fragment of an acetabulum, undetermined.	Do.	...	...	A section examined under the microscope and proved to be mammalian.

94	— ?	Fragment of shaft of long bone, articular ends broken off: undetermined.	Do.			
95	— ?	Slab of bone undetermined.	Do.			
96	— ?	Portion of the shaft and articulating head of a long bone, too imperfect for satisfactory identification.	Do.			
97	Pachydermata.	Molar tooth detached, imbedded in matrix, undeterminable (an Rhinoceros ?)	Do.	...	...	Only the lower surface seen. The crown covered by matrix.
98	Colossochelys Atlas.	Rear portion of sternum of one side.	Do.	...	...	No mark.
99	— ?	Water worn undeterminable piece of bone. Infiltrated with iron, bivalve shells on it.	...	...	...	Inferred from the shells to be of Perim.
100	Equus.	Lower end of humerus with inner half of articulating surface broken off.	Do.	...	...	No mark.
101	Ruminantia	Lower end of right tibia with articulating surfaces entire (of size of Neel-gau nearly).				
102	Mastodon Perimensis.	Fragment comprising a portion of the horizontal ramus of the right lower jaw broken off vertically in front of the penultimate from molar, and behind at the commencement of the offset of the coronoid process, shewing the entire molar alveolus together with the hollow alveolus of another molar behind. The molar unluckily has the crown very much mutilated, but it distinctly shews the masses	Doubtful, but inferred to be Perim Island. An Ava ?	...	Unknown.	No mark or information as to its history. It is much to be regretted that no record has been kept of the history of this specimen, or where it came from. [After having gone

PERIM ISLAND SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
P/102	Mastodon Perimensis.	of 4 ridges bounded by a large fang in front and also behind. A depressed disk bounded by a belt of enamel shews that the first ridge was partially affected by wear; and a similar character shews that the 2nd ridge was slightly touched. A great part of the enamel, on the right side of the ridge remains entire. The 3rd and 4th ridges are completely denuded of their shell of enamel, but they were probably quite intact. The 1st and 2nd ridges—which remain of them—shew the longitudinal bisecting line. The valleys are transverse, but it is seen that they are interrupted in the middle by an accessory lobule in front and behind each ridge; their outer termination is bounded by a large depressed mammilla exactly as in M. latidens. The enamel is very thick, and shews deep rough line of rugous longitudinal grooving. The mammillæ of the ridges appear very high, and it is seen that the accessory lobules in the furrows form a projecting loop to	Doubtful, but inferred to be Perim Island. An Ava?	...	Unknown.	over all the collections the opinion arrived at is that this and the next specimen, No. 103, are more likely to have been from Ava than Perim Island] 23rd Feby. 1855.

		the disk of depression exactly as in M. Perimensis. Dimensions— Length of fragment, ... 8,8 Height from lower surface of ramus, to alveolar margin, outside, ... 7,4 Transv. diameter of ramus at posterior end of tooth, ... 6,5 Length of molar, ... 7, Width about middle, ... 3,5 Height of crown at 2nd ridge, ... 2,6 Nothing more than the cup of the last molar is shewn behind; the lower edge of the ramus is broken off and shews a canal of about $1\frac{1}{2}$ in diameter running longitudinally; the nature of this is doubtful. This jaw is seen to be of less diameter proportionally than the jaws attributed to M. latidens, more especially Ava specimen No. 3. There is hardly any matrix to indicate whence the specimen came, and there is nothing of the yellow marly conglomerate generally found on Perim Island fossils. But the characters of the tooth are so close to M. Perimensis that it is attributed to that species.				

PERIM ISLAND SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
P/103	Mastodon latidens.	Fragment of the horizontal ramus lower jaw, right side, broken off near the symphysis in front and immediately behind the molar in rear, broken also at the lower border. It contains an entire molar in situ being the 1st of the true molars, and the remains of a worn out milk molar in front. The crown of the tooth which is well worn, shows 4 distinct ridges, the 3 anterior of which are ground down each into a continuous broad disk, shewing about the middle, the characteristic loop of enamel in front and behind, which indicate the accessory mammillæ situated about the middle of the valleys. The last ridge shews 2 disks which are distinct, although nearly confluent; the talon is barely touched. Length of fragment, ... 6,1 Height ditto to crown of molar in front, ... 4,7 Ditto ditto behind, ... 5,3 Length of molar, ... 4,1	Perim Island ? an Ava ?	...	Unknown.	No mark. There is some sandy matrix sparingly covering the fossil, not like the ordinary Perim matrix. But the characters of the tooth are entirely those of Mastodon latidens; a younger tooth closely resembling it contained in the Scinde collection No. 2.

		Width of ditto, at 2nd ridge, ... 1,8 Ditto ditto, at 4th ridge, ... 2,2 Length of fragment in front of molar, 1,7				
104	Mastodon Perimensis.	Small portion of the rear part of an inferior molar, shewing a talon and 2 worn ridges.	Perim ?	...	...	No mark or information.
105	Do. ?	Fragment consisting of 2 ridges of the crown of an inferior molar.	P. I. ?	...	...	Ditto, very doubtful if of Perim.
106	Do. ?	Portion of shaft (?) of bone, inferred from comparison to be the inferior extremity of the right femur, broken off at both ends, affording no decisive character for determination.	P. I.	...	Unknown.	Marked Perim, 1836. Can this be the specimen referred to J. A. S. IV. 438, as "a large and indisputable portion of a Buffaloe's Horn," which Baron Hugel refers with probability to the Nerbudda fossil Bos. There is no other bone in the Perim collection which comes so near to the description.
107	Elephas Nomadicus? or Mastodon ?	Detached fragment of right humerus without articular surface, broken off near middle of shaft. Length 2 feet 4 in., greatest girth, 2 ft. 7 in. This is about	P. I. ?	...	...	This specimen is attributed to Perim Island with great doubt.

PERIM ISLAND SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P 107	Elephas Nomadicus? or Mastodon ?	large enough to correspond with lower end of humerus, No. 16, but belongs to opposite side.	P. I. ?			
108	Elephas. — ?	Water worn fragment of scapula shewing glenoid cavity, otherwise much mutilated.	P I.	...	...	Marked Perim.
109	Rhinoceros.	Fragment of left scapula comprising the glenoid cavity, neck and tuberosity together with the low commencement of the spine of very large size: the whole of the laminæ broken off. The curve of the glenoid cavity on the antero-posterior direction is very great: and the cup is much less circular than in the most of the known forms of rhinoceros.	P. I. ? an Ava ?	...	...	No mark or No. and the Perim origin very doubtful. In mineral condition very much like some of the Ava specimens. Vide A. 263.
110	Do.	Part of an upper molar vertically broken through transversely about the middle, agreeing in size with No. 30.	P. I.	...	...	No mark. Perim matrix.
111	Do.	Metacarpal, outer toe, left fore leg with both articular surfaces. The bone is short and the inferior articular surface very thick and oblique.	Do.	...	...	No mark.

	Equus.	Fragment of upper maxilla, right side, containing the penultimate and the next two adjoining anterior molars: the crown covered by matrix, but of the size of No. 34.	Perim.	...	...	Perim matrix, no mark or number.
112	Colossochelys.	Part of the plastron, shewing the hitch of junction with the carapace of a very large chelonian, but too mutilated and weathered for precise determination. Part of the bone is upwards of two inches thick.	Perim ?	...	?	No mark or number inferred to be Perim, from the mineral condition.
213	Leptorhynchus.	Mutilated fragment of the cranium shewing the occiput and condyle, together with part of the crotaphyte foramen on the left side.	Perim.	..	?	Perim mineral condition, no mark or number.
114	...	Greater portion of the carapace and plastron of a smaller sized species of Emys or Testudo. The anterior portion both of carapace and plastron removed, with loss of the most characteristic parts. This specimen requires further and careful examination.	Perim ?	J. A. S. Vol. V. VI. p. 79 ?	...	No mark or number, but this specimen is supposed to be that referred to by Capt. Fulljames, as the shell of a Tortoise.
115	— ?	Mutilated and weathered fragment of a bone, with the surface mostly abraded, shewing a posterior and anterior articulating surface, the latter convex, the former concave (like the vertebra of a crocodile), but in addition a supplementary articular surface on one side behind the cup. The sides of	Perim I.	...	...	Inferred to be Perim from the matrix.

PERIM ISLAND SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P 115		the bone are entirely abraded. The specimen is too imperfect to pronounce any opinion upon: but it is of much interest, and deserves further research.				
116	— ?	A lumbar vertebra of large size jet black in colour, from iron infiltration, and nearly entire. The articular surfaces of the body abraded : the neural arch complete, shewing a very large spinal canal nearly circular : the spinous process sloping backwards at a considerable angle, keeled above and nearly bifid near the fracture underneath. No costal depressions or oblique articulating surfaces visible. If of a mastodon or elephant must have belonged to a young animal.	...	...	...	Inferred to be Perim, from the incrustation on the surface of marine remains.
117	Elephant or mastodon.	Mutilated body of a vertebra, much weathered Articular surfaces and apophyses broken off.	Perim.	...	?	Perim, from marine incrustated.
118	— ?	A dorsal vertebra, body much mutilated, neural arch present, articular surfaces of the body destroyed, of the size of a large ruminant.	Do.	...	...	No mark or number.

119 120	Ruminant.	Two metacarpal or metatarsal fragments, shewing the inferior articulating heads, shaft of both broken off close to the head, of the size of a large Bos, but too mutilated for exact determination.	Do.	...	...	Marked Perim, no number.
121	...	A mutilated femur end with one condyle.	Do.	...	...	Perim from matrix.
122	?	Mutilated fragment of horn core ?	Do.	...	...	Do. do.
123	?	Ditto ditto ?				
124	?	Amorphous fragment of bone, surface denuded, but somewhat like the thickened marginal portion of the carapace of Colossochelys.				
125	...	Mutilated lower end of a femur.				
126 162	...	Various fragments of bone, too mutilated for determination (157 lower end of a small ruminant radius).	Do.	...	...	Most of these fragments referred to the Perim from the matrix, some of them doubtful.
163 164 165	Equus.	Three fragments of detached molar teeth.	Do.	...	Unknown.	So inferred from the matrix.
166	*Bramatherium ? ?*	Fragment of a detached molar of a large ruminant, the inner divisions broken off, and too mutilated for determination. The outer ? enamel surface is very flat, requiring further comparison.	Do.			
167	Cervus ?	Lower jaw, right side, posterior end of the horizontal ramus, containing the two last molars of a young adult deer. The teeth	Do.			

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P 167		show a low accessory pillar between the barrels as in Cervus (like No. 177).				
168 169	Crocodilus.	Two small detached vertebræ of young animals.	Perim.	...	Baron Hugel ?	169 marked H. an. Hugel ?
170	?	A cylindrical fragment of bone without articular surfaces.	Do.	...	Baron Hugel.	Marked.
171	?	Mutilated fragment of inferior extremity of a femur with one condyle: of small size.				
172	Crocodilus.	Fragment of upper maxillary, right side, containing three alveoli.				
173	Ruminant	Lower end, right radius of a middle-sized ruminant, the articular head too mutilated for exact determination.	Perim I.	...	Unknown.	Perim matrix.
174	Do.	Right calcaneum of a small ruminant: the lateral astragaline apophysis broken off and covered with matrix.	Do.	...	Do.	Marked Perim ; from J. Prinsep's wall cases.
175	Do.	Lower end of tibia corresponding in size with No. 173.	Do.	...	...	Perim matrix.
176	Do.	Lower end of small ruminant corresponding in size to No. 174.	Do.	...	...	No mark.
177	Cervus.	Fragment of horizontal ramus, left side of a species of Cervus : so inferred from the accessory low pillar of enamel : contain-	Do.	...	Unknown.	Marked Perim.

		ing two molars covered with matrix and mutilated on the inner side.				
178	— ?	Portion of mutilated rib.	Do.	...	Do.	Marked Perim.
179	Ruminant.	Lumbar vertebra of a middle-sized ruminant.	...	...	...	Perim matrix.
180	— ?	Body of a middle sized lumbar vertebra, neural arch broken off.	...	...	...	Perim.
181 to 187	...	Fragments of bone too imperfect for determination.	Do.	...	...	No. 181 & 185, marked Perim.
188	Ruminant.	Upper and right metacarpal of a small ruminant: mutilated.	Do.	...	...	Perim; from one of J. Prinsep's wall cases.
189	...	Lower articulating head of a metatarsal of a middle-sized ruminant: shaft wanting and probably of a young animal.	Do.	...	...	Do. do.
190	...	Fragment of flattened portion of a rib.	...	...	...	Has a vitreous polish, marked Perim.
191	Antelope.	Sixth cervical vertebra, the body and anterior and posterior articular surfaces nearly entire together with the inferior transverse processes: neural arch broken off, vertebrary foramen on one side. The articular head and cup, are very oblique: and the inferior transverse processes have a *very* broad expansion, closely resembling what is seen in the Neel-gau, with which the bone agrees in size nearly, but a little smaller.	Perim ?	...	...	No mark or No. but inferred from the matrix to be Perim; from one of J. Prinsep's wall cases.

PERIM ISLAND SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
P/192	Antelope ?	Seventh cervical vertebra, body and articular surfaces quite entire: neural arch broken off. Part of the superior and inferior transverse processes remaining, no vertebrary foramen ; agrees very closely in relative size with the specimen No. 192, possibly contiguous vertebræ of the same animal.	Perim Is.	...	Unknown.	Perim matrix, no mark, from one of J. Prinsep's wall cases.
193	Rhinoceros.	Broken and mutilated portion of a molar.	Do.	...	Do.	Perim matrix, no mark.
194	?	Fragment of a cylindrical bone somewhat flattened above, but articular head broken off. A femur of crocodile ?	Perim Is. ?	...	...	Of doubtful origin.
195	...	Lower end of a mutilated femur, one condyle broken off, and otherwise disguised by matrix.	Do.	...	...	No mark or No. on Bera ?
196	Leptorhynchus.	Small fragment of the jaw of one side, containing the alveoli of 5 teeth ; otherwise much mutilated.	Do.	...	...	No mark or number.
197	Crocodilus.	A mutilated and very much weathered fragment of the cranium, shewing the upper and lower jaws locked together, from in front of the orbits on to the extremity of the alveolar border. The surface of	Perim Is. ? or Ava ?	...	Do.	No mark or indication of its origin. The specimen is black and the matrix unlike any other of

		the bone has been so weathered as to be honey-combed all over, leaving no precise character for determination. On the left side the alveoli of, 4 or 15 teeth may be counted. The nasal opening is present but the margin broken all round.				the Perim Island Fossils. An Ava?

NERBUDDA SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
N/1	Elephas Subg. Stegodon. St. insignis.	Lower jaw, left side, comprising the anterior portion of the horizontal ramus, truncated in front of the symphysis, containing six ridges of a molar tooth, the 3 anterior of which are worn, the rest intact; broken off behind near the commencement of the ascending ramus; covered over with soft sandy matrix.	Beltary Ghat Nerbudda.	J. A. S. XIX. 489, being in the Proceedings dated July, 1849, but not printed till July, 1850, with the Proceedings of that date.	Dr. Spilsbury.	This specimen is in the usual mineral condition of the Nerbudda fossils as contrasted with those from Ava and the Sewalik Hills, viz.: being white, soft and friable and adhering to the tongue, there being no ferruginous or calcareous infiltration. Of great importance, as being the only specimen of this Sewalik Stegodon from the Nerbudda in the A. Society's collection.
2	Elephas nomadicus.	Specimen comprising the facial part of the head, and a portion of the cranium with 2 molar teeth in the maxillaries on each side, the chevron mutilated from the	Housingabad Nerbudda.	J. A. S. X. 620, with 2 pls. of figs. 1841.	Do.	Mineral condition as in No. 1. *Remark.*—The whole of the upper part

		frontal downwards, and the posterior part of the cranium wanting, the palate entire. Anterior molar well worn and reduced to 6 or 7 ridges,—posterior molar consisting of about 22 plates, which are narrow and very deep; 3 or 4 of the anterior ridges touched with wear; all the posterior ones intact and the backmost of all not yet united. Length of tooth 15 in. greatest height at middle 6 in.: greatest width $2\frac{3}{4}$ in.				of the cranium wanting. This specimen according to Dr. Spilsbury was used for many years as a "Dhobee Pát" or washing board, see Journ. As. Soc. Vol. VIII. p. 950 (1839).
3	Do.	Lower jaw left side, comprising the anterior portion of the horizontal ramus, truncated at the symphysis and near the middle behind, containing part of a molar (probably the last) broken off in front and behind, shewing 8 perfect ridges and the section of some others; mentory foramen of large size; height from lower margin of jaw to crown of tooth 10 inches, greatest thickness of jaw 6 in.	No mark or label nor any trace of information whence it came, but believed from dental character to be from the Nerbudda and of E. Nomadicus.	...	...	The ground surface of the molar exhibits exactly the same pattern as in the large jaw. This specimen must have belonged to an adult animal of large size. Inferred to be from Dr. Spilsbury.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/4	Elephas namadicus	Lower jaw, right side, comprising the anterior part of the horizontal ramus, truncated near the symphysis and about the middle; containing a portion of a molar tooth of which 9 worn ridges are well preserved.	Do. as No. 3.	...	—?	Inferred to be from Dr. Spilsbury, Nerbudda.
5	Do.	Fragment, comprising the left maxillary with a molar implanted in it, the rest of the head and face wanting. The molar half worn, and belonging to an adult animal. Extreme length of molar $9\frac{1}{2}$ in. greatest width in middle $3\frac{3}{4}$ in. greatest height at last plate 8 in.—the crowns of 12 well worn plates shewn. Exhibiting well the wavy section of the enamel plates—the anterior plates worn out, a gritty sandstone matrix adhering to it. Enamel very fresh and pearly-looking.	Nerbudda.	...	Labelled Dr. Spilsbury.	
6	Do.	Specimen consisting of both rami of lower jaw, nearly entire from the symphysis to the ascending ramus on the right side—the posterior portion only remaining of the left side, the anterior connecting	Brimhan Ghat on the Nerbudda, 16 miles N. W. of	J. A. S. Vol. II. p. 583, pl. 20, fig. 1.	Dr. Spilsbury.	In the ordinary mineral condition of the Nerbudda fossils. A very valuable specimen from

		portion wanting. Molar tooth on right side well worn in front, intact behind, the dimensions of the tooth are, extreme length visible 11½ in. breadth 3½, grinding surface 8½ by 3 in., girth of ramus 24 in., extreme length of ramus from tip of symphysis to posterior edge 26½ in. Grinding surface shewing 13 plates with a pattern as in No. 3.	Nursingpore.	De Blainv. Osteogr. Livr. Elephas. pl. 11. Fauna Antiq. Siv. Fasc. 6, pl. 56, fig. 9.		the completeness of the jaw.
7	Do.	Left femur in 3 pieces—the upper consisting of the articulating head and trochantine expansion, the lower of the inferior end with a part of the articulating surface and a portion of the shaft, the third piece forming the central portion of the shaft detached; the pieces do not fit, but Dr. Spilsbury measured the entire length of the bone when imbedded in the matrix and found it to give the following dimensions. Extreme length 63 inches, circumference of the head 27 in., diameter of head 8,75 in., greatest width from edge of trochanter to edge of articulating surface 18 in., breadth of condyles 11 in.	Sagouni Omar Nuddi near Nursingpore.	J. A. S. Vol. III. p.398, pl.24. fig. 3, 4 & 5. De Blainville's Osteographie Livraison, Elephas pl. 11, 3 fig. Fauna Antiq. Sival. pl. 56, fig. 5.	Do.	Estimated height of animal as inferred by Mr. J. Prinsep, from comparative ratios with the Indian Elephant, 14¾ feet.
8	Do.	Right humerus complete in 3 fragments, of enormous size—extreme length from edge of trochanter to inferior articulating surface 4 ft. 9 in. Girth around head	Do.	J. A. S. Vol. VI. p.487, pl.33. fig. 1 to 6.	Do.	

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/8	Elephas namadicus.	3 ft. 11 in. Breadth of inferior articulating surface 13 in.	Saouni Omar Nuddi near Nursingpore.	De Blainv. Osteogr. Livraison Elephas, pl. 11. Fauna Antiq. Siv. pl. 56, fig. 7.	Dr. Spilsbury.	
9	Do.	Right ulna of same animal complete in 2 pieces; length 4 ft. 3 in.: girth round edge of upper articulating surface and base of olecranon, 3 feet 5 in.—greatest width from anterior edge of articulating surface to posterior border of olecranon 16 in.	Do.	Do.	Do.	
10	Do.	Left humerus in 2 pieces, middle portion of shaft wanting, of dimensions corresponding to No. 8.	Do.	Do.	Do.	
11	Do.	Femur right side in 2 pieces, middle portion of shaft wanting, also upper articulating head, condyles perfect, also pitellar surface perfect, belonging to same amul as No. 7.	Do.	Do. and Vol. III. p. 400, pl. 24, fig. 6, 10, 11. De Blainv. Osteogr.	Do.	This is the bone of the opposite side to No. 7; and shews the condyles more completely.

				Livraison Elephas, pl. 11. Fauna Antiq. Siv. pl. 56, fig. 6 & 6a.		
12	Do.	Left os innominatum nearly complete except the expanded portion of the ilium in 4 connecting pieces, the acetabulum and foramen ovale perfect, the articulating surface of the symphysis complete, the ischium and pubis complete, the ilium broken off immediately above the acetabulum. Dimension of the acetabulum: antero-posterior 9¼ in. transverse 9½ in.	Do.	J. A. S. Vol. VI. p. 487, fig. 5-6. De Blainv. Osteogr. Livraison Elephas, pl. 11. Fauna Antiq. Siv. pl. 56, fig. 8.	Do.	This specimen, Nos. 8, 9, 10 and 12 belong to the same animal and were excavated together at Sagouni. J. Prinsep considers that the femur No. 7 and 11 were also from the same animal "an animal of more than 15 feet" J. A. S. note, Vol. VI. p. 488. NOTE.—This is not the acetabulum from Hill near Jubbulpoor, mentioned by Dr. Spilsbury, J. A. S. Vol. V. p. 833, a very doubtful affair.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N 13	Elephas namadicus?	Portion of ivory tusk—length 4½ in., greatest diameter 5½ in., with one end polished but soft and friable.	Beltary Ghat.	...	Dr. Spilsbury, Aug. 1840, as per label.	
14	Do. ?	Short cut fragment of ivory tusk, thickness 2 in. long diameter, short diameter 8 in.	Nerbudda near Jubbulpore.	...	Dr. Spilsbury, 19th Dec. 1849, as per label.	
15	Do. ? *Hippopotamidæ.*	Mutilated fragment of ivory tusk.	Nerbudda ?	...	Dr. Spilsbury ?	
16	Hippopotomus palæindicus.	Specimen comprising the entire cranium truncated anteriorly about the middle of the nasals containing 3 back molars on each side, and on the left side the alveolus of the last premolar. Occiput, occipital and sagittal crests, zygometer arches and orbits nearly entire, also the glenoid articulating surfaces perfect, occipital condyles broken off. Teeth—the 2 anterior true molars worn, and shewing the patern characteristic of the species, the	Nerbudda. Nursingpore.	J. A. Soc. Vol. XIX. p. 489, in proceedings of July, 1849, but not printed till Proceedings of July, 1850.	Do.	An exceedingly fine specimen, more perfect than the original specimen upon which was founded the species, as figured in Faun. Antiq. Siv. pl. 57: fig. 1 and pl. 58, fig. 4. It shews well the great sa-

		last molar in germ and not protruded through the gums, indicating a young adult animal; nasals raised above the plane of the front, at the naso-frontal suture.				liency of the occipital and sagittal crests and the projection of the orbits above the plane of the frontal.
17	Do.	Short fragment comprising the chin portion of the lower jaw both sides near the anterior extremity of the symphysis, containing the alveoli in half section of 4 incisors and 2 canines. Diameter of central incisors 1,5 in., of the external incisors 1,85 in. The true character of the specimen was recognised by Dr. Spilsbury.	Nerbudda.	J. A. S. Vol. X. p. 626, pl. F. fig. c. d.	Do.	This is a very valuable specimen as it conclusively refutes the opinion put forward by Dr. Blainv: Liv. 22 Hippopotamus, page 240, that the Nerbudda Tetraprotodon is identical with the living African species, the middle incisors being the largest in the latter while the converse holds in the former, and the relative proportion of the incisors differs very remarkably.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P 18	Buffalo. Bos Palæindicus.	Cranium with the cores of 2 horns attached broken off in front across the orbits where it is much mutilated, occiput, right condyle and left styloids with the occipito-sphenoid region and zygometic fossa on either side nearly entire. Core of right horn in 4 pieces, extending nearly to the apex. Left core in 3 pieces, of less extent. Dimensions—Length of right core 2 feet 9 in., breadth at base 6½ in., thickness 4¼ in. Length of left core 1 foot 11 in., breadth of skull at base of occiput 13 in., ditto from occipital condyles to plane of frontal 10 in. The horn-cores spread out more horizontally, and with a less inclination upwards than in the existing wild buffalo, slightly concave anteriorly and convex behind. A cord stretched between the tips would subtend the plane of the cranium behind the frontal. In all these respects differing from the existing wild buffalo, and so far as their horizontal offset is concerned approximating to	Nerbudda. Site 2 coss from Sagouni.	J. A. S. Vol. V. p. 488.	Dr. Spilsbury.	The specimen is in a soft friable condition, and covered with calcareous matrix; probably belonged to an adult male of large size. This fine specimen has remained unfigured in the Journal. It would appear to have been the intention of Mr. J. Prinsep to have described and drawn it: this he postponed, expecting similar specimens from Conductor Dawe. His subsequent fatal illness prevented this design from ever

		the Gayal, from which, however, they differ in the flattened form of the horns and in every other respect. The posterior border of the cores encroaches much upon the temporal fossa, which is narrow. These characters are so constant, as shewn by still better specimens in the British museum, that there can be little doubt that the species is distinct from the existing wild buffalo.				being carried out, (vide Journ. VI, 489.)
19	Do.	Mutilated cranium broken off across the orbit with the base of the left core attached, the right core with the parietals and vertex broken off. Occiput nearly entire with the condyles, occipito-sphenoid region and right styloid and mastoid entire, together with the left temporal fossa. Width of core at base $6\frac{1}{2}$ in Thickness $4\frac{1}{2}$. Width between the outer margin of occipital condyles $5\frac{1}{2}$. Long diameter of occipital condyle 2,75 in. Transverse 1,75. Foramen magnum antero-posterior diameter 1,7 in. Transverse diameter 1,75 in. This would appear to be an adult male specimen of the same species as No. 18.	Hoshingabad, Nerbudda.	J. A. S. VIII. 950, figs. 3 and 9 on two separate plates.	Dr. Spilsbury.	This fossil is incrusted with a ferruginous sand, which colours the whole of the surface and is much harder than the Nerbudda fossils usually are.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N 20	Bos Palæindicus.	Specimen consisting of a nearly entire cranium broken off anteriorly at the diastema, and bearing the cores of both horns, the right broken off a little above the base, the left 9 inches long. All the molar teeth on both sides protruded and worn, the occipital portion agrees in form with the large specimen No. 18, of which it would appear to be an adult female, judging from the less prominent development generally and the smaller size of the horns. Length of specimen 17½ in., height from sphenoid to surface of frontal 8 in., width of skull at constriction between the horn-cores and orbits 8¼ in., width of brow between middle of orbits 7½ in. Length of brow from vertex to upper margin of orbit 7½ in. length of line of molars, left side, 6½ in. —greatest width of left horn 5 in., thickness 3 in. The left horn-core, right condyle, right styloid, left zygomatic arch, and glenoid surface, palate, occiput frontal, and both	Nerbudda, Hoshingabad.	J. A. S. Vol III. p. 399. (1834.) pl. 24, fig 12-13.	Dr. Spilsbury.	Memo.—This cranium is described by Mr. James Prinsep, and a series of 8 different dimensions as compared with a skull of a Buffalo (not stated whether wild or tame) prepared by Dr. Evans, Journ. loc. cit. p. 401.

		orbits, also the two maxillaries are nearly entire. Nasals broken off. The specimen is incrusted with a hard calcareous gritty matrix.				
21	Do.	Specimen comprising left maxillary nearly complete in height and containing 6 molars protruded from the jaw—all the rest of the skull wanting. Length of line of molars 6 in., height from edge of molars to upper margin of the fragment $9\frac{1}{4}$ in.	Nerbudda.	...	Do.	Probably adult, but no evidence as to whether male or female.
22	Do.	Lower jaw, left side, comprising nearly the whole length of horizontal ramus, broken off in front near symphysis, and behind at the offset of the ascending ramus in a line with the molars, containing 6 adult molar teeth, all protruded and worn, but not of an old animal. The grinding pattern is a little obscured by matrix which encrusts the specimen: but it would appear to correspond with Bos palæindicus. Length of fragment 13,25 in., length of line of molars $7\frac{1}{2}$ inch., height of jaw at the last molars 4 in.—at the anterior edge of the 1st premolar $2\frac{1}{4}$ in. Length of diastemal portion $2\frac{1}{2}$ in., greatest thickness $1\frac{3}{4}$ in.	Do.	...	Do.	

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N 23	Bos ?	Lower jaw, right side, comprising the posterior half of horizontal ramus and a broken portion of ascending ramus with the 3 back molars protruded and worn, and the posterior half of last premolar, all the specimen encrusted with a calcareous gritty matrix.	Nerbudda.	...	Dr. Spilsbury.	
24	Do.	Portion of maxillary, right side, containing the last 2 molars well worn, the enamel plate of grinding surface very flexuose.	Do.	...	Do.	
25	Do.	Maxillary left, containing the last 5 molars, in situ and well worn.	...	...	...	Marked No. 1, and probably belonging to a cranium which bears the same number.
26	Do.	Fragment right maxillary containing 3 back molars well worn and the posterior half of the last premolar.	Do.	...	Do.	Marked No. 11.
27	Do.	Fragment lower jaw, left side containing the last molar—adult—worn.	Do.	...	Do.	Marked No. 9.
28	Do.	Fragment lower jaw, left, containing 2 molars.	Do.	...	Do.	

29	Do.	Fragment upper jaw, left: containing 2 back molars, encrusted with calcareous matrix and marked No. 3.				
30	Do.	Enormous core of bovine ruminant, encrusted with matrix, much curved in the outline and nearly circular in section. Girth, 5 inches above base, 1 foot 7 in. Length along convex curve 3 feet 8 in. Diameter where tip is broken off 3 in. This horn core differs in size, form and curvature from any known ruminant. It is much more circular than that of the Gour or Gayal, in which respect it differs still more than the Bos palæindicus and it would appear to indicate a distinct fossil species now extinct. The core is hollow throughout having a thin shell. Surface encrusted thickly with matrix which requires removal. Consists of 2 fragments which join and a portion of the tip is wanting.	Do.	...	Do.	Matrix since cleared off, and the two pieces united.
31	Bos namadicus.	Fragment of horn-core, left side, detached, presenting the same characters as No. 30, namely—with curved outline and nearly circular in section, it is less covered with matrix and at the upper and convex edge shews a ridge similar to Bos grunniens which it resembles also in circular section. The specimen is partly	Jahnsee Ghat on the Nerbudda.	...	Do.	Marked No. 2.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/31		covered with hard sandy matrix and is harder and stronger than the other bovine remains above described. Length 11 inches, girth near base $14\frac{3}{4}$ in., at small end of specimen 13 in.				
32	Bos palæindicus.	Detached fragment of horn-core with a slight portion of the frontal attached to its base, the left side, hollow and in the soft condition of the other Nerbudda fossils. Length $11\frac{1}{2}$ in. girth near base $19\frac{3}{4}$. Long diameter 7 in., short diameter $4\frac{1}{2}$ in.	...	...	Dr. Spilsbury.	
33	Bos namadicus.	Mutilated cranium, presenting the occipital and spenoidal region nearly entire, left occipital condyle and right mastoid complete; occipital and frontal surfaces perfect from superior margin of foramen magnum to the commencement of the nasals, cores of both horns broken off—on the left side within the base of the pedicle of the core—and on the right side the fracture includes the base of the core, the margin of the frontal and orbit, all of which are removed. A portion of the upper border of left orbit remaining.	Near Jhansee Ghat on the Nerbudda.	J. A. S. Vol. XIII. p. 765, pl. 2, fig. 3c.	Do.	Dr. Spilsbury from his notes and memoranda believes the specimen to have been found near Jhansee Ghat. Marked No. 9.

		The frontal plane longitudinally is slightly convex with a shallow concavity upwards between the commencement of the horn-cores. The vertex projects posteriorly to a great extent so as to overarch the plane of the occipital condyle $2\frac{3}{4}$ inches. Occipital region concave from above downwards; in these two respects differing very notably from the skulls of the Gour and Gayal. Judging from the section of the core on the left side; it was more or less cylindrical in form, in this respect also differing from these two species. Length of specimen from vertex to broken margin in front 13 in., height from posterior sphenoidal probatera to vertex about $8\frac{1}{2}$ in. Width of skull at base of occiput $9\frac{1}{2}$ inches, height of occipital surface from inferior margin of foramen magnum to posterior border of vertex, $7\frac{1}{4}$ inches. Long diameter of occipital condyle $2\frac{3}{4}$ in., short do. 1,6 in. Width of frontal at constriction behind orbits $8\frac{1}{4}$ in. Dr. Spilsbury states that this cranium and the specimen No. 31 were found in the same place, they are marked No. 1 and No. 2. In conjunction with the huge horn-core No. 30, they would			The forehead of this specimen is flat and slightly concave above; it is square, taking the base between the orbit, its height is about equal to its breadth; the horns are attached to the extremity of the highest salient line of the head; the plane of the occiput forms an acute angle, with the forehead (it is over arched) and the plane of the occiput is nearly quadrangular instead of semi-circular: all these being distinctive characters of the Taurine Bovidæ (ox) as contrasted with the Bisons and Aurochs: vide Cuvier Menagerie Du

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
P						
33		appear to afford conclusive evidence of a fossil species of bos from the Nerbudda distinct both from Bos palæindicus and Gour and Gayal, or any other described existing form. From the complete synostosis of the 2 frontals, it is inferred that the animal was an aged adult and the smaller size of the horn as compared with specimen No. 30 would seem to indicate that it was a female.				Museum, article Zebu. p. 4.
34	Bos namadicus.	Specimen of the posterior part of the cranium nearly perfect on the left side from the vertex to the middle of the orbit; mutilated on the right side; the inter frontal suture, and that uniting the 2 lateral occipital with the superior occipital are widely open, shewing that the animal was very young, which is further borne out by the dimensions. The left horn-core is attached to the extent of about 5 inches and it is given off horizontally with a slight inclination upwards; the occipital condyles, the styloids, and tympanic bullæ are entire				

		on both sides, together with the auditory foramina, and the whole of the basi-sphenoid region. The right side of the vertex and the upper part of the frontal together with the right orbit are gone. Part of the left orbit remains. The plane of the frontal exhibits the same general form as in specimen No. 33, and the vertex projects posteriorly overarching the occipital exactly as in that specimen. Length of fragment from vertex to anterior fracture 6½ in. Width of forehead at constriction behind the orbits 6½ in. Long diameter 2,6 in. short diameter 2,3 in. Extreme distance between the outer border of the 2 occipital condyles 3,6 in. The core is cylindrical in section like specimen No. 31, being a little flattened in front and more convex behind. This specimen would appear to afford further proofs of the inference derived from 31 and 33, as to the distinctness specifically of Bos namadicus.				
35	Bos.	Specimen consisting of facial part of the cranium from the orbits, exhibiting the maxillaries on both sides with the entire line of molars in situ, the posterior part of the diastema and a portion of the nasals; the intermaxillaries broken off.	...	...	...	Species indeterminable without more detailed comparison.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/35		This specimen is exactly in the same mineral condition with a ferruginous tinge as the cranium No. 20. *Dimensions*—Length of the molar series, right side, $5\frac{3}{4}$ in., distance between the outer surfaces of the molars at the middle of the series $4\frac{3}{4}$ in. Width of palate taken at the rear of the last molar 3 in., ditto in the middle 3,25 in., ditto between anterior molars 3 in. The molars on the right side are quite entire, they are all protruded and well worn.				
36	Bos. —— ?	Fragment comprising facial part of cranium like 35, but crushed laterally, presenting the 2 maxillaries with the whole series of molars in each; nasals broken off by a fresh fracture near commencement of diastema; the palate is broken from the crushing; and the opposite lines of molars are at unequal heights. Length of left molar series 5,9. Encrusted with an argillaceous matrix. The molars are all protruded and in same state of wearing as in No. 35.				

37	Bos —— ?	Detached fragment comprising part of right frontal and orbit. Length about 5 in. width $4\frac{1}{4}$. Species indeterminable.	Hoshingabad.	J. A. S. VIII. 950.	Dr. Spilsbury.	Found in the same locality with the specimen No. 2.
38	Elephas namadicus.	Fragment of Ilium comprising part of the acetabulum and adjoining bone. Length of specimen $10\frac{1}{2}$ in.	Nerbudda.			
39	Elephas —— ?	Specimen consisting of a slender tusk in 7 pieces, amounting in length to 5 ft. $9\frac{1}{2}$ in. found imbedded in a pebbly conglomerate which has been cleared off all the fragments except one. Large diameter nearly 4 in., small diameter nearly the same. Tapers at both ends in consequence of the dislamination of the nucleal extremity, tip broken off. The tusk is bent in a moderate curve.				
40	Elephas namadicus.	A superb cranium of Elephas namadicus of enormous size, exhibiting the whole width of the occiput and occipital fossa, the foramen magnum, the temporal fossa on both sides, also both maxillaries with the last molar of each in situ; also part of both incisives with the empty sheath of a huge tusk in each and the inter-incisive fossa: also the whole length of the palate and a considerable portion of the diastema. The frontal region mutilated from the bosses of the vertex on either side on to the incisive border of the nasal	Nerbudda, Brimhan Ghat.	J. A. S. Vol. XII. p. 165.	Do.	This cranium was found at Brimhan Ghat where Dr. Spilsbury discovered the first specimen (lower jaw No.) by the late Lieut. Matthew Smith then a Principal Assist. to the G. G. Agent, Saugor and Nerbudda Territory who pre-

NERBUDDA SPECIMENS.

No	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/40		opening, involving the loss of the greater part of the parietal and frontal bones and the whole of the nasals which are broken off together with the zygomatic arches and orbits. A portion of the deeper part of the orbital fossa is shewn on the right side, but considerably within the broken off rim of the orbit. The orbitary ala of the sphenoid is also shewn together with the spheno frontal fissure, leading to the optic foramen and the common spheno-orbitary and round foramen. The whole of the spheno-palatine region is preserved but the occipital condyles are more or less mutilated and the rim of the foramen magnum injured. A portion of the jugal apophysis of the temporal on both sides remains, but the glenoid surface is removed with the exception of the inner portion on the right side near the base of the apophyses ; the auditory foramen broken off exteriorly is also distinctly visible on the right side. The surface of the specimen				sented it to Dr. Spilsbury. It was presented by Dr. S. in 1840 to Col. Sir P. S. Cautley for comparison with the Sewalik fossils, but miscarried on the road, and was lost sight of for some years, when Ensign Hickey, 1st Regt. N. I. found it in the compound of a bungalow at Kamptee (Query Agra ?) Learning its history he obligingly brought it down to Barrackpore and handed it over to the Asiatic Society in Dr. Spilsbury's name in Ja-

		where entire is black and shining, as if coloured with iron, but it yields a white fracture. It is almost entirely denuded of enveloping matrix, but the incisive sheaths are filled with a hard gritty calcareous sandstone, which also occupies the cancellar cavities of the diploe where shewn denuded. The skull had fortunately escaped crushing: and the mutilated part only involves that portion of the frontal region which, from its slight power of resistance, would yield first to the effects of exposure to the weather. *Dimensions.* Extreme length from broken margin of incisives to the projecting part of the occipital bosse behind, ... 2 „ 10,75 Length from anterior border of occipital foramen to commencement of diastema, ... 1 „ 10,25 Extreme width of the fragmented portion of the skull behind, ... 2 „ 11,5 Width from middle of occipital crest to fragmented border of cranium left side, ... 1 „ 5,25			nuary, 1843, (vide J. A. S. Vol. XII. p. 165). The above particulars have been verbally communicated by Dr. Spilsbury from notes and memoranda, 10th Jany. 1855.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/40		Length from base of occiput at posterior margin of foramen magnum to commencement of the diastema, ... 2 „ 1,5 Length from the protuberance of occipital bosse to the interior margin of the nasal opening, 2 „ 1,75 Height from posterior end of grinding surface of right molar near the pterygoid to summit of right occipital bosse, ... 2 „ 6,25 Height from anterior end left molar to base of left incisive bone at border of nasal opening, ... 1 „ 7 Height from inferior margin of occipital foramen to apex of vertex right side, ... 1 „ 6,25 Length of alveolar cavity measured from the inferior (distal) end of pterygoid process to commencement of molar in front, right side,..... 1 „ 1				

		From ditto to floor of intermaxillary fossa, ...	1 „ 6,75				
		From the intermaxillary suture to the outer border of the maxillary portion of the incisive alveolus, ...	0 „ 11,3				
		Length of incisive fossa remaining, ...	0 „ 11,5				
		Width of incisive fossa near apex, ...	0 „ 2,6				
		Ditto anteriorly at fracture of incisive, ...	0 „ 5,6				
		Transverse diameter of the incisive alveolus, ...	0 „ 6,6				
		Antero-posterior ditto, ...	0 „ 6,2				
		Depth of occipital fossa from the plane of the bosses at the vertex, ...	0 „ 9,5				
		Greatest width of ditto, ...	0 „ 7,5				
		Narrowest diameter do. between the bosses, ...	0 „ 4,6				
		Greatest length of fossa from occipital foramen to anterior fragmented margin, ...	0 „ 12,5				
		Depth of jaw from lower margin of maxillary to orbitary process of sphenoid near the middle, ...	0 „ 10				

NERBUDDA SPECIMENS.

No.	*Genus and Species.*	*Description of Specimen.*	*Where from.*	*Reference to history.*	*Donor.*	*Remarks.*
N/40		From posterior border of palate to broken edge of incisives, 1 „ 3,5 Width of palate in front between alveoli, ... 0 „ 2,2 Do. behind, ... 0 „ 3,6 Length of crown of molar, .. 1 „ 1 Width of do. in front, ... 0 „ 4 Do. about middle, ... 0 „ 3,9 Both of the molars are in situ and appear to have been well worn, the crown on to the back ridges being protruded, the anterior plates had been worn out. The grinding surface is a good deal damaged by blows and abrasion, but the plates are seen to be closely approximated with narrow disks and plaited enamel. The disks expand into a loop in the middle as seen in lower jaw of No. 6; about 22 plates can be counted; besides some of the most anterior which have probably been worn away. The teeth are the last true molars of a large adult, and probably male, judging from the size of				

		the tusks. An entire cranium in very good preservation of E. namadicus is figured in Faun. Antiq. Siv. pl. 12 A. the original is lodged in the United Service Museum, Charing Cross, London; it was probably a female. The specimen above described, agrees so entirely with that figure, that there can be no doubt of its belonging to the same species. The enormous width and depth of the occipital fossa which form so prominent a character in the drawing are still more exaggerated in the fossil, together with all the other characteristic marks. Unfortunately the anterior bulge of the forehead is broken off, or it might have been expected to have been still more largely developed. The crowns of the molars are better preserved than in the figured specimen, which shows only 10 or 11 plates, Faun. Ant. Siv. pl. 12 B. fig. 3. This cranium is fully equal in size to correspond with the huge specimens of fore and hind legs from Sejouni in the Museum presented by Dr. Spilsbury.				
41	Bos namadicus.	Fine specimen of cranium, nearly entire exhibiting the whole of the chevron region from near the vertex on the right	Jhansee Ghat on	J. A. S. Vol. 8, p. 951.	Dr. Spilsbury.	Dr. Spilsbury from notes and memoranda believes it

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/41		side, as far as the extremity of the nasals, which are broken off at their tips; also all the maxillary portion of the diastema with a portion of the right incisive, the two orbits nearly entire, the two zygomatic arches and temporal fossæ, the 4 back molars on the right side and the 5 front molars on the left side, all protruded and worn so as to shew that the animal was fully adult, but not aged; also the whole of the lower surface of the cranium from the diastema back along the palate and spheno-palate region on to the occipital foramen. The basi-sphenoid protuberances, occipital condyles, foramen magnum, tympanic bullæ and glenoid cavity perfectly entire with the auditory foramen right side partially shewn; also the posterior and basal portion of the occipital entire. Deficient only at the vertex which is broken off obliquely from the right angle downwards and forwards to the left, the fracture having removed the left side of the	the Nerbudda.			to be from Jhansee Ghat.

2 1 2		occipital plane, the whole of the occipital crest and the cores of the 2 horns. On the left side, the fracture encroaches upon the plane of the frontal, but on the right the base of the core of horn is in situ, broken off vertically in a line with the supra-auditory apophysis at the root of the jugum. Truncated in front about the middle of the incisives, the supra- and infra-orbitary foramen present on both sides. In all other respects the specimen is singularly perfect, with the exception of the inferior border of the right orbit which is abraded. The form of the cranium in this specimen differs very notably from that of the Gour and Gayal, and other Bisontine forms recent or fossil, in its much greater elongation as compared with the width—in the lesser prominence of the orbital margin and in the more slender proportions of the whole of the facial and muzzle regions. In these respects, it exhibits a considerable resemblance to the taurine division of Bos as represented by Bos primigenius. This is well shewn in the form of the construction between the base of the horn cores and orbits, which is in a long curve.				

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N / 41		Extreme length of specimen 18 in. From the broken margin of vertex to commencement of the diastema 16 inches. From ditto to upper border of orbit 6½ in. Antero-posterior diameter of orbit 3,3 in. Transverse ditto 2,5 in. Length from anterior border of orbit to commencement of diastema 7,3 in. Length from broken border of vertex to the naso-lachrymal termination of the frontal 10,5. Length from posterior border of occipital foramen to the posterior border of the palate ..... From posterior border of palate to commencement of diastema. Length of truncated portion of muzzle in front of molars 2,2 in. Length of line of molars left side 6,1 in. Width of frontal at constriction behind the orbits 7,1 in. Ditto between the outer borders of the orbits 9 in. Height from surface of occipital condyle to plane of frontal at vertex 6,4 in. Length of nasals to commencement of incisive bone 7,2 in. Width of face immediately in				

		front of orbits 6.2 in. Ditto at the maxillary tuberosities 5,9 in. Ditto at commencement of diastema 3,4 in. Interval between outer margin of zygomatic arches 8,2 inch. Interval between external surface of maxillaries at the rear of the back molar 4,7 in. Ditto at commencement of penultimate molar 5,3 in. Interval between inside of back molars 3,1 in. Ditto between the penultimate molars 3,2 in. Ditto in front between the 2 premolars 2,9. Width between the diastemal ridges of the maxillaries 1,5 in. From anterior border of orbit to infra-orbitary foramen 6,2 in. The interfrontal suture is distinctly shewn, also the transfrontal and the other sutures of the face. From the description and dimensions above given, the cranium is considered to indicate a distinct species of Bos, and to agree with the specimens Nos. 32, 34 and 35, and to be a female. The general form presents many analogies with the cranium of Bos primigenus figured in Owen's Brit. fossil mammalia fig. 208, page 498, and with the crania figured in the Ossemens fossils: pl. 172, figs. 1 and 2.				

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/42	Elephas namadicus.	Fine specimen consisting of the upper maxillaries of both sides and the pterygoids with one large tooth on either side quite perfect together with the palate and the posterior opening of the nasal fossa, also a portion of the diastema in front; all the rest of the cranium wanting. The teeth are the last true molars on each side; part of each is worn and part concealed in the alveolus: on the right side the first 5 ridges are ground down, each to a continuous transverse disk, the 4 next are slightly touched by wear, and the rest either enveloped with cement or concealed in the pterygoid part of the alveolus. The plates are of very great height, which is shewn by a denudation of the alveolus on the inside. The crown of the tooth is shewn as perfectly as if it had belonged to a recent specimen. Dimensions:— Extreme length of fragment, .. 1 7,3 Extreme length of molar,..... 1 2	Nerbudda. Nursingpoor.	J. A. S. Vol. 6, p. 321 and p. 488 foot note!!	Dr. Spilsbury.	This appears to be the "splendid upper jaw" mentioned by Dr. Spilsbury as having been presented to the Society, Vol. 6, p. 488, and mentioned by J. Prinsep as being "a fine fossil, ferruginized, of a smaller size than the Sagauni elephant," Vol. 6, p. 488 in foot note; and at p. 321 as "a very perfect elephant's head, ferruginized of a smaller size:" (viz. than the 15 feet Sagauni elephant). This notice of it as "a very perfect head,"

		Length of grinding surface which includes 9 ridges, ... 0 7 Height of crown at 8th ridge,.. 0 8 Width of crown in front at 2nd ridge, ... 0 2,75 Width of do. in the middle,.... 0 3 Intervals between molars in front, 0 2,75 Do. behind, ... 0 5,4 Length of palate, ... 0 8,4 The teeth in this specimen are very remarkable for their very great length, and the height of the plates as compared with their width; in all these respects corresponding with E. namadicus, Nerbudda Cat. No. 2. About 20 plates can be counted. The enamel is very much plaited, and some of the plates have a reflexed loop at the margin. Several large palatine foramina are visible on either side. The posterior opening of the nasal fossa is wide and deep.				which it is not, the cranial portion being wanting, led to doubts as to the identification of the specimen.
43	Do.	Fragment of an old molar of upper jaw, shewing remains of 9 ridges. Plates very close and disks of wear narrow; enamel of crown well plaited.	Nerbudda ?	...	Dr. Spilsbury.	Very like in wear of crown the Sewalik ? specimens marked S. 73 and S. 74.
44 to 46	Elephas namadicus ?	Three fragments of a molar, each consisting of 2 plates, and probably all belonging to the same tooth; but the intermediate connecting portions wanting.				

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N 44 to 46		Specimen 33, remarkable for depth of plates which are, ... 7,5 Width, ... 3,2				
47	Bos namadicus ?	Fragment of cranium, very much mutilated shewing only occiput with occipital condyles, foramen magnum, and right mastoid process; with a nest of calcareous crystals occupying the cranial cavity, and the cancelli of the hollow vertex. This must have belonged to an animal of very large size. Query? Did the huge horn core No. 31, belong to this cranium ?				
48	Cervus —— ?	Fragment of basal portion of a deer horn shewing the base, and the broken offset of a very low bez-antler after the form of cervus frontalis ?	Nerbudda.	...	Dr. S.	Marked No. 15.
49	Elephas —— ?	Fragment of ivory tusk, very light and friable. Much mutilated and inferred to be from the Nerbudda.				
50	Hippopotamus palæindicus.	Mutilated fragment of right maxillary containing 3 molars very much fragmented.	Do.	...	Do.	Marked No. 6.

51	—— ?	Fragment comprising the lower extremity of the femur, left side. The inner condyle entire: the outer broken off: the trochlear pulley broad and square, part of the shaft attached: of large size. The surface of this specimen is black, but the fracture white. It adheres to the tongue and looks like a Nerbudda fossil more than Ava or Sewalik. Part of the shaft appears to have been recently broken off. Vide the Sewalik H. specimen No. 295 of the opposite side, with which it agrees most closely, but is larger, as was to be expected. The specimen S. 240 certainly not Sewalik.	Nerbudda ?	...	?	The determination of this specimen is doubtful as regards its Nerbudda origin. There is no mark of any kind about it, nor positive indication. Can this be the specimen figured J. A. S. Vol. X. p. 626, as fig. 2, of pl. A.? If so a part of the shaft since broken.
52	? Undetermined.	Large specimen comprising a thick mass of bone, presenting on its principal surface a shallow circular concavity of which the rim along half its extent is partly broken off: the body of the mass contracting at the sides below the rim: and shewing the broken off bases of two broad thick apophyses in front: the obverse portion (opposite the concavity) a thick solid mass of bone cancelli. Dimensions:— Greatest length of specimen, ... 14,75 Greatest diameter of shallow cup, 9	Near Jubbulpore, Nerbudda.	J. A. S. Vol. 5, pp. 674 and 833.	Dr. Spilsbury.	First mentioned in the J. A. S. Vol. V. p.674, as being from *Sagauni*: but corrected by Dr. Spilsbury, p. 833, as being from near Jubbulpore.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/52		Tranverse do., ... 8,7 Diameter of constricted part below the cup, ... 6,8 Remaining thickness from edge of cup, ... 6,5 This remarkable specimen was forwarded by Dr. Spilsbury in 1836 as the acetabulum of an elephant, and is mentioned as such in the Proceedings: the shallow cup above described having led to this impression. But on minutely comparing it with the fossil acetabulum of an elephant, it is not reconcilable in any way, the resemblance being limited merely to the cup in each. A great portion of the mass was chiseled off, under the impression that it was not organic: but on examining some thin films of splinter with the microscope (280 diameters) distinct "*bone cells*" of large size with *canalicules* also of large diameter were abundantly visible (by Jones, Walker and H. F.) shewing the reptilian charac-				

		ter. The splinters were longitudinal and the reptilian resemblance is therefore open to some doubt. The cancelli of the bone are filled with silex, which scratches glass freely, and the bony plates between are made up of carbonate and phosphate of lime. On digesting a fragment in muriatic acid, free effervescence takes place: the lime portion is dissolved and the silicious casts are left in slender parallel tubes which anastomose by small transverse branches presenting a very beautiful appearance. But if the acid is left long, *the whole mass including the silex* is dissolved into a glutinous thick fluid. The external surface of the bone shews a reddish surface: the fresh fractured cancellar part is marked with a pinkish tinge, and the weathered portion greenish in some places. The specimen was found by Dr. Spilsbury about a mile from Jubbulpoor on the debris of a limestone rock, the whole of which is *capped over by basalt.* The site is marked 1b of Spilsbury's Section, J. A. S. Vol. 2nd, p. 582, pl. xx. fig. 2. The limestone is said to be silicious and compact; consisting of carbonate of lime				

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/52		holding grains of clear silex together, and here and there tinged with chlorite. The specimen differs entirely in its mineral condition from the much later Nerbudda fossils of the Hippopotamus and elephant bone bed: and it would seem to indicate another series of older fossil remains of great interest. It is too mutilated and indistinct to admit of any inference as to the animal at present. The shallowness and form of the cup are wholly different from what is seen in the elephant: in the latter the bones bulge out below the cup, while in the fossil there is a broad constricted fossa. It is equally irreconcilable with any form of reptilian pelvis: nor is it intelligible if regarded as a brain cavity. The animal must have been of enormously large size.				
53	—— ? undetermined.	Fragment of bone silicified: from the same quarter: amorphous, and scratches glass. Presents no determinable character. Imbedded in a very hard chert with a pale greenish tinge.	Jubbulpore.	J. A. S. Vol. I. p. 456.	Dr. Spilsbury.	The first fossil specimen presented by Spilsbury. Found in a site first noticed by Capt. Sleeman in 1830.

54	Elephas namadicus.	Rare specimen comprising a large portion of the sternum of enormous size. The mass is wedge-shaped in section with a deep keel below and broad above, where it shows two pairs of costal articular surfaces, and the commencement of a third pair, the bone being there broken off. The uppermost pair of discs appears to represent the junction with the first pair of ribs? The specimen was enveloped in a mass of calcareous sandstone, which left a small portion exposed. The episternal portion is wanting. Dimensions :— Length of the fragment, ... 12,7 Depth at anterior end, ... 6,3 Ditto in the middle, ... 6,5 Width of upper surface anterior end, 4,9 The upper (vertebral surface) forms two hollows bounded by ridges: i. e. two sternal elements.	...	...	...	No mark or number but inferred from the matrix to be from the Nerbudda.
55	...	Fragmentary specimen like No. 53, silicified and indeterminable.	...	J. A. S. Vol. I. p. 456.	Dr. Spilsbury.	Bears a faint ink mark, not legible.
56	...	Flat slab of bone, indeterminable, and doubtful as to its origin.	? Nerbudda?	...	...	No mark or No.
57	...	Do. do. of larger size, the surface abraded, and indeterminable.	Do. ?	...	...	No mark.

NERBUDDA SPECIMENS.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
N/58	Bos — ?	Posterior part, upper maxillary, right side with one molar, the last.	...	...	Dr. Spilsbury ?	No mark, but seems a fragment of one of the Nerbudda specimens.
59	Do.	Upper maxillary, left side, of a large bovine form, shewing 4 molars: but too imperfect for precise determination.	Nerbudda. Beltaree Ghat.	...	Dr. Spilsbury.	Marked, Beltaree Ghat.
60	Do.	Upper maxillary, left side, containing two molars, one of which broken off. Specimen very fragile.	Nerbudda.	...	Do.	No mark or No.
61	Do.	Fragment of upper jaw, left side, comprising the orbit; probably of the same specimen as No. 59.	Do. Beltaree Ghat.	...	Do.	Marked, Beltaree Ghat.
62	Do.	Fragment of horizontal ramus, lower jaw, left side, containing two molars.	Nerbudda.	...	Do.	Marked, No. 7.
63	Do.	Fragment of horizontal ramus, lower jaw, right side, containing the two last molars.	Do.	...	Do.	Marked, No. 4.
64	Do.	Mutilated fragment, upper maxillary containing one molar entire, another broken	Do.	...	Do.	No. 13 ?
65	Do.	Fragment of horizontal ramus, lower jaw, left ? side, containing two molars: very mutilated.	Do.	...	Do.	No. effaced.

66	Equus.	Fragment of horizontal ramus, lower jaw, ... side containing two molars, the lower border of the jaw mutilated.	Do.	...	Do. ?	Bears no mark or number: but has all the appearance of a Nerbudda fossil.
67	Bos — ?	Fragment of upper maxillary, containing two young molars, one of them in germ, and untouched by wear.	Do.	...	Do. ?	No mark or No.
68	Cervus ?	Upper maxillary fragment containing two molars, concealed by matrix, of a smaller sized ruminant.	Do.	...	...	No mark or No.
69	...	Fragment of bone indeterminable, resembling No. 56, but surface not abraded.	Do.	...	Do.	Marked, Dr. Spilsbury.
70	—— ? Ruminant Bos ?	Articulating head and part of the shaft of the left humerus: the tuberosities broken off, and only a part of the pulley under the great tuberosity visible: the bone longer in proportion than that of a large male Gour. The characteristic parts are removed, so that it cannot be confidently identified. Is it of the large Nerbudda Buffalo or of Hippo. palœindicus. The characters are more of a ruminant than of the latter. The specimen bears no mark or number, but from the mineral character is inferred to be of the Nerbudda series.	Do.	...	?	No mark or No.

FOSSILS FROM SCINDE.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S C						
1	Mastodon latidens	Fragment of large upper (?) molar comprising two ridges, little touched by wear. The only complete furrow present is transverse without interruption as in the Ava specimens. The longitudinal bisecting cleft is very distinct. The weathered appearance is peculiar, differing from any thing else in the collection. The teeth appear to have been imbedded in a yellowish clay.	Sehwan on the north side of the Jukkeo Hills.	Proceedings J. A. S. Vol. p.	Dr. Young through Dr. Spilsbury.	Found in a low range of sandstone breccia composed of angular pieces of nummulitic limestone cemented with clay.
2	Do.	Third milk molar, lower jaw, left side (?) shewing the posterior two and a half ridges and the "heel" all well worn. The two last ridges are supported on a large fang. The anterior with the whole of the first and half of the second ridge are broken off. The valleys are transverse without interruption, vide Perim Island specimen No. 103.	Do.	Do.	Do.	Do.
3	Do.	Portion of a second milk molar shewing two ridges and a low talon ridge supported on one fang. The valley very open.	Do·	Do.	Do.	Do.

4	Mastodon ? or Elephas.	Middle metacarpal left fore leg a little mutilated at both ends, measuring 8½ in. long and 3,4 vertical in diameter of distal articulation. The specimen is as clear of matrix as a recent bone, but very brittle, although mineralized.	Sehwan.	Proceedings J. A. S. Vol. p.	Dr. Young.
5	Rhinoceros ?	Inner metacarpal left fore leg, a little mutilated at the upper articulation. It is proportionally very short and the upper articulation deep as compared with the Indian unicorned rhinoceros.	Do.	Do.	Do.
6	Rhinoceros.	Fragment of the left scapula of a very large species, shewing the greater portion of the glenoid cavity, neck and a part of the spine: the greater part of the blade broken off. The lower margin of the glenoid cavity partly broken off. Tuberosity of very large size.	Do.	Do.	Do.
7	Crocodilus.	A very large lumbar vertebra, anterior articular surface abraded.	Do.	Do.	Do.
8	Rhinoceros.	Distal extremity middle metatarsal, of large size, shaft broken off.	Do.	Do.	Do.
9	Mastodon.	Small fragment of tip of an incisor tusk shewing engine-turned section.	Do.	Do.	Do.
10	Rhinoceros.	Fragment of left scapula of a small sized rhinoceros: shewing glenoid cavity, neck and trochanter, blade broken off. Of a much smaller size than No. 6.	Do.	Do.	Do.

FOSSILS FROM SCINDE.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
S C 11	Ruminant.	Astragalus of a moderate-sized species, smaller than Bos.	Sehwan.	Proceedings J. A. S. Vol. p.	Dr. Young.	
12	— ?	Fragment of the right os innominatum with part of the acetabulum.	Do.	Do.	Do.	
13	Ruminant.	Dorsal vertebra, neural arch broken off, of the size of Bos: one of the most anterior with concave and convex articular surfaces to the body.	Do.	Do.	Do.	
14	Leptorhynchus.	Fragment of cranium comprising the upper maxillary portion anterior to the orbits and palatine bones, and posterior to the premaxillaries containing on either side six teeth in their alveoli: of a large size.	Do.	Do.	Do.	
14?	Do.	A mutilated fragment of do.	Do.	Do.	Do.	
15	Do. or Crocodilus.	Vertebra of a crocodile.	Do.	Do.	Do.	
16	Crocodilus.	Vertebra, caudal.	Do.	Do.	Do.	
17	Do.	A weathered vertebra, neural arch removed.	Do.	Do.	Do.	

18	Do.	A caudal do. do.	Do.	Do.	Do.	
19	?	Mutilated fragment undetermined.				
20 to 23	...	Fragments of ribs undetermined.				
24	Rhinoceros.	Portion of the small scapula No. 10.				
25	...	Mutilated fragment undetermined.				
26 27	...	Mutilated fragments of lower jaw of mastodon (?) containing the fangs only.				
28 29	Ostræa ?	Two specimens, each an entire valve.				
30	Ruminant.	A detached upper molar of a bovine ruminant.				

Cape of Good Hope Fossils.

No.	Genus and Species.	Description of Specimen.	Where from.	Reference to history.	Donor.	Remarks.
C G H	*Reptilia*					
1	Dicynodon (Owen) — Spec ?	A mass consisting of 4 large vertebræ with their apophyses connected together and covered with matrix.	Cape of Good Hope.			
2	Do.	Another similar mass containing part of three vertebræ.	...			
3	...	The detached body of a vertebra, apophyses broken off.	...	...	Mr. Pope.	Marked, Trotter, 1836.
4	...	Fragment of bone undetermined.	...	...	Do.	Do.
5	...	Do. of rib-like bone, undetermined.	...	...	Do.	Do.
6	...	Do. do.	...	...	Do.	Do.
7	...	Fragment, undetermined.	...	...	...	No mark or No.
8 to 51	...	A number of small mutilated fragments of bone undetermined.	...			
52	...	A larger expanded fragment.	...			

	ENGLISH ENALIO-SAURIAN FOSSILS FROM THE LIAS.				
Ichthyosaurus.	Specimens, shewing a paddle, vertebræ, ribs, &c. no attempt made at an identification of the species or of the special bones.	Lias of England.	None known	Unknown.	These specimens were found mixed up with the Sewalik Hill and Perim Island fossils, and bear no mark or No. to indicate their origin.
	MAURITIUS FOSSILS.				
Reptilia Testudo.	A collection of about 34 Humer. fem. and other leg bones. 29 Scapulæ and Pelvis fragments. 32 portions of carapace and plastron and other bones in small pieces.	Mauritius.	Asiatic Researches Vol. XVIII. in appended list of Presentations.	Mountain Dujardin.	These bones were in a shelf labelled bones of the Dodo from the Mauritius, but they are entirely of Testudo; and there are only a few modern? bird bones among them, and these not referable to the Dodo.

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